& WILDLIFE SERVICE
IC OCEANIC FISHERY
INVESTIGATIONS

PACIFIC FISHERMAN

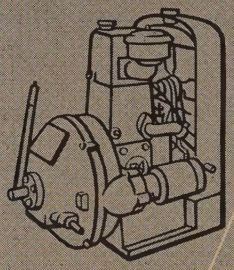
JANUARY
1950

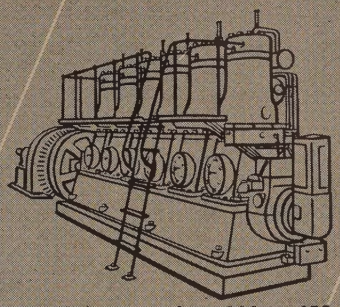
A Miller Freeman Publication

TWENTY-FIVE CENTS

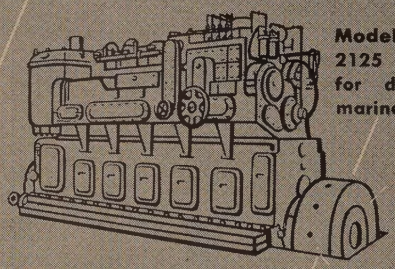
1911

Model 45B: 5¼ horsepower engine for stationary and marine service.



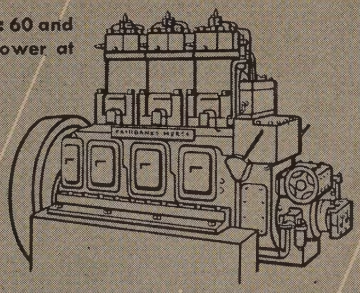


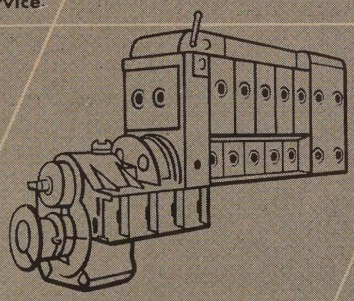
Model 32: Horsepower from 120 to 450. For slow-speed heavy-duty service.



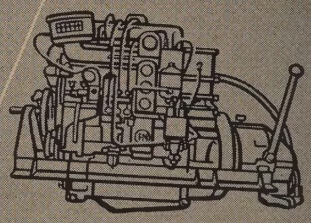
Model 37: 500 to 2125 horsepower for direct drive marine service.

Model 42: 60 and 90 horsepower at 450 r.p.m.

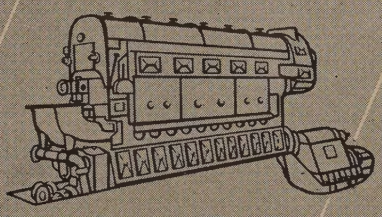




Model 31: Horsepower from 175 to 500; with 2 to 1 reduction gears optional for marine service.

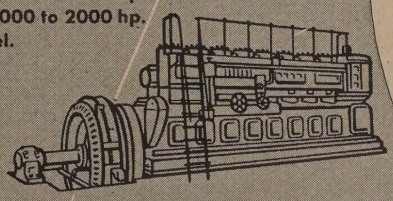


Model 48 Marine Engine: Also available for stationary or portable service. 3.5 to 80 hp.



Model 38 Opposed-Piston Engine: Horsepower from 960 to 1920 with 2 to 1 reduction gear for marine service.

Model 33 Stationary Engine: 500 to 2000 hp. Diesel, 1000 to 2000 hp. Dual Fuel.



When it comes to Diesel Power...

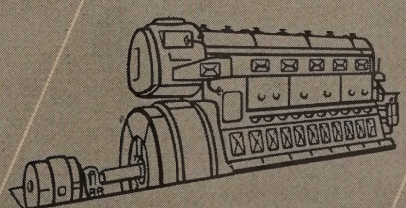
From 3.5 hp. to 3500 hp.

Low-cost, efficient power for all marine services ... modern, dependable power for newest, fastest road locomotives . economical power for largest to smallest municipal and industrial plants . Fairbanks-Morse is the proved source for the full range of diesel applications. For skilled assistance and impartial recommendation for the diesel for your specific service, write Fairbanks, Morse & Co., Chicago 5, Ill.

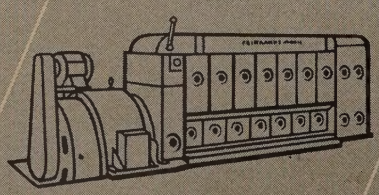
FAIRBANKS-MORSE

A name worth remembering

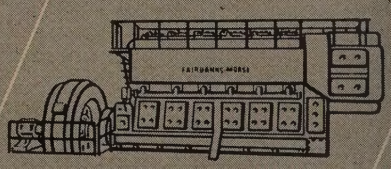
DIESEL LOCOMOTIVES • DIESEL ENGINES • PUMPS • SCALES
MOTORS • GENERATORS • STOKERS • RAILROAD MOTOR
CARS and STANDPIPES • FARM EQUIPMENT • MAGNETOS



Model 38 Opposed-Piston Engine: 960 to 1920 horsepower at 720 r.p.m.



Model 31: Diesel generating set with kw. ratings from 118 to 360. Marine and stationary—Dual Fuel available in larger sizes.



Model 31: 2100 to 3500 horsepower diesel or dual fuel engine for heavy-duty stationary service.

PACIFIC FISHERMAN

A Miller Freeman Publication

Vol. 48 No. 1

JANUARY, 1950

TABLE OF CONTENTS

Tuna Peaks in '49 11
Salmon Research 14
Bad News on Philippine Fish Trade 15
Australia Shipping Tuna to U. S. 12
Sardine Strike Settled 13
"Madhouse of '49" Leads to Longer Season Demand 16
Sun Beam—Power to Take the Tuna 18
Mr. Krug's Last Act 20
Restocking Barren Waters on the Fraser 21
Westgate and Sun Harbor Merge 29
Alaskan Explorer's Pinpoint Tuna with Loran 31

President ..... Miller Freeman
Manager ..... Lawrence K. Smith
Editor ..... DeWitt Gilbert
Executive Editor ..... Stedman H. Gray
Advertising Manager ..... C. L. Hillyard
Circulation Manager ..... Miller Freeman, Jr.

Publishing Office

71 Columbia St. Seattle 4 MAin 1626

Branch Offices

LOS ANGELES 13
A. W. Ponsford, Associate Editor
124 West 4th St. MU. 8194

SAN FRANCISCO 5
Stuart F. Leete, Associate Editor
121 Second St. GA. 1-5887

VANCOUVER, B. C.
Charles L. Shaw, Associate Editor
Royal Bank Bldg. MA. 1520

MEMBER AUDIT BUREAU OF CIRCULATIONS

PORTLAND 4
534 S. W. 3rd Ave. BE. 6348

WILMINGTON
315 N. Avalon Blvd. TE. 4-4538

NEW YORK CITY 17
370 Lexington Ave.

NEW ORLEANS 12
305 Barrone Street

LAST MINUTE NEWS SUMMARY

England to Spend $6,000,000 For Canadian Salmon in 1950

England is prepared to purchase approximately $6,000,000 worth of Canadian canned salmon in 1950, it informed the Canadian industry just at the end of December. The fish would be from the 1950 pack.

The British Columbia operators are understood to have indicated that they expect to have only Sockeyes available for export from the 1950 pack, inasmuch as they anticipate only a short pack of Pinks, and a long one of Sockeyes.

It is considered obvious that, if the U. K. expects to purchase any Pinks in North America in 1950, it will have to get them from the United States.

Halibut Split-Season Plan Blocked by Doubt of Legality

Prospect of any action by the International Fisheries Commission to set-up a "split-season" under the present treaty dimmed in the last days of December with a report that legal opinion had held that the commission's authority to provide for a "split-season" was "subject to question."

Informed sources held that, if the commission actually has received such an opinion, there was little likelihood that it would undertake a program which might be challenged.

Indications point with virtual certainty to the delivery of such a legal opinion questioning the authority of the commission to establish a "split-season" under the Treaty of 1937.

Whoever it was that challenged the commission's authority and caused it to seek the legal opinion could certainly be counted upon to press for a decision in the event that the commission sought to extend the period of fishing by any "split" device.

A Miraculous Draft of Fishes Made Possible by Electronics

The great fishing pictured on the cover of this issue, in which the seiner *Western Ranger* of the Nelson Bros. Fisheries, Ltd., fleet took 1,180 tons in a single set of her net, was made possible through the practical application of electronics to fishing. The great school of herring was detected by Capt. Hans Stoilen on his vessel's echo-sounder in weather so foggy that no sign of fish could be seen. Acting on the information provided by his sounder, he set his net blind and made this enormous catch, pictured here in a photo by Pat Keatley. Full story of this great fishing on Page 39.

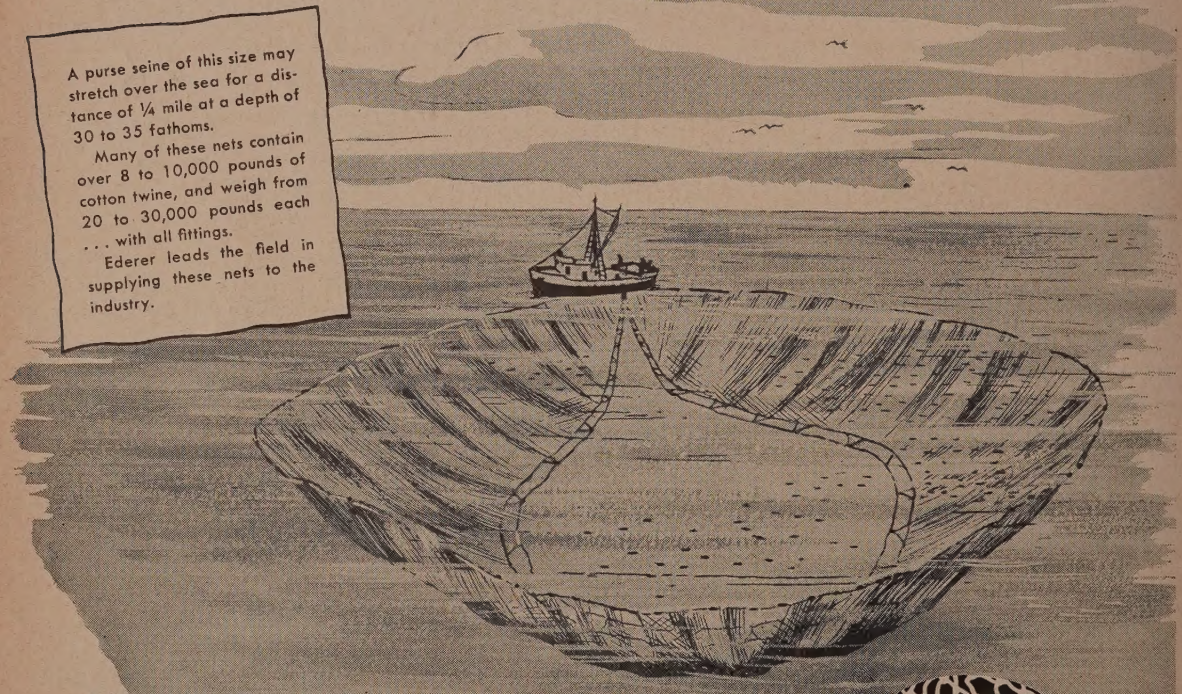
Pacific Fisherman (with which is combined West Coast Fisheries) is published monthly except in January, when publication is semi-monthly, by Miller Freeman Publications Incorporated, at 71 Columbia Street, Seattle, Wash. Subscription: United States and Possessions, $3.00; Canada, $3.00; Foreign, $4. Entered as second class matter May 29, 1945, at the Postoffice at Seattle under the Act of March 3, 1879. Vol. 48, No. 1.

EDERER'S *Dependable* netting

A purse seine of this size may stretch over the sea for a distance of ¼ mile at a depth of 30 to 35 fathoms.

Many of these nets contain over 8 to 10,000 pounds of cotton twine, and weigh from 20 to 30,000 pounds each . . . with all fittings.

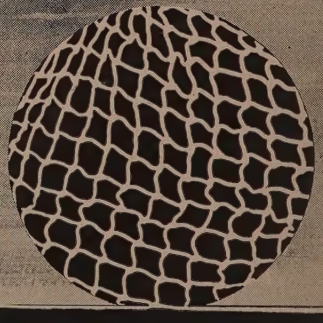
Ederer leads the field in supplying these nets to the industry.



● Man alive—if you could only take a peek and see for yourself what goes into EDERER NETTING—you'd know right off the bat why more and more EDERER nets are being chosen at all principal fishing ports . . .

If you could see all those skilled EDERER craftsmen at work . . . see the modern facilities, methods, quality materials with which they work, you'd realize why EDERER NETTING enjoys the enviable reputation it does, among commercial fishermen . . .

68 years' experience means *dependable* NETTING every time. EDERER'S *Dependable* NETTING can be depended upon on any body of fresh or salt water . . . depended upon to bring in the profit-loads for you. Next time out—why not be *sure* with EDERER'S *Dependable* NETTING!



R. J. EDERER COMPANY

HOME OFFICE: 540 ORLEANS ST, CHICAGO

PACIFIC COAST DISTRIBUTORS

C. J. HENDRY COMPANY
San Pedro San Diego
San Francisco, California

SUNDE & D'EVERS COMPANY
Seattle, Washington
Ketchikan, Alaska

THE BEEBE COMPANY
Portland, Oregon
Astoria, Oregon

"There's nothing so cozy as a Continental Can"

say the **SARDINE SISTERS**

Always TOP QUALITY, Continental cans are clean, bright, and tight. Our plants are strategically located to give you the KIND OF SERVICE YOU WANT.

You can't beat Continental as a dependable source of supply!

CONTINENTAL CAN COMPANY

707 SOUTH HILL STREET, LOS ANGELES 14, CALIF. • RUSS BUILDING, SAN FRANCISCO 4, CALIF. • 653 SKINNER BUILDING, SEATTLE 1, WASH.

ADAMS' BEST

PROTECT

YOUR CATCH with Adam's Best!

Whatever your specific type of fishing, you can be sure that Adams Netting will never let you down! No wonder so many fishermen are buying Adams Nets.

First trip out they get that wonderful satisfaction of knowing that come what may, Adams Nets have the stamina necessary to bring those profitable maximum loads aboard ship. They're great nets for "bringing home the bacon"—you know the kind of bacon that comes on green paper and is printed by Uncle Sam . . . Once you buy Adams Netting you will know the full value of perfect workmanship, uniformity and quality.

ADAMS NET & TWINE CO.
701-3 NORTH SECOND STREET
ST. LOUIS, MO.

LIST OF PACIFIC COAST DEALERS

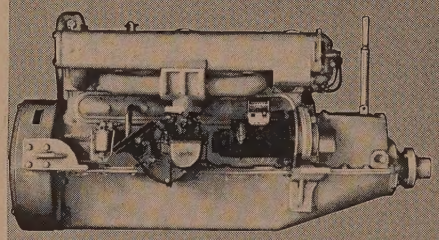
SEATTLE MARINE & FISHING SUPPLY CO., Seattle, Wash.
Englund Marine Supply Co. Newport and Astoria, Ore.
San Diego Marine Hdw. Co., San Diego, Calif.
A. D'Acquisto & Sons Monterey, Calif.
Angelo D'Acquisto San Francisco, Calif.
SEASIDE SUPPLY STORES, INC., San Pedro, Calif.

LATHROP POWER

The same fine quality

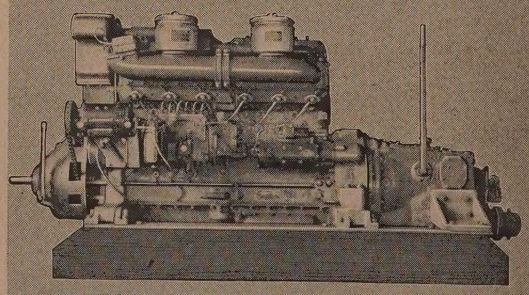
NOW AT LOWER COSTS TO YOU!

Check 1950 Price Lists



GASOLINE ENGINES

From 21 hp. to 175 hp. Competitively priced, quality engines in slow, medium and high speed ranges.



DIESEL ENGINES

From 50 hp. to 187 hp. Heavy-duty, economical power.

THE *Lathrop* ENGINE CO.
MYSTIC, CONNECTICUT
SINCE 1897 MANUFACTURERS OF RELIABLE MARINE ENGINES

A ½ billion dollar business

Let Canco help *you* share in the tremendous canned fish market

THIS YEAR American women will buy at least half a billion dollars' worth of fish in cans!

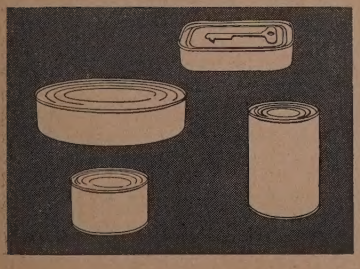
The American Can Company will gladly help you get your share of this market—just as it has helped so many other successful canners.

Canco's vast resources are at your disposal—from nutritionists and engineers to the technologists in the field who see to it that your operation rolls smoothly at all times.

At the right you will see a few of the many services we are qualified to give *you*.

Why let another week roll by before you get the facts that may help you get more dollars out of the fish you market?

CALL CANCO FIRST



How Canco will help you

Lay out your plant . . . give you blueprint and layout recommendations for greatest efficiency.

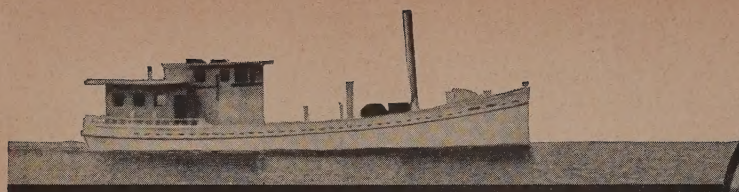
Canco's nutritionists and testing kitchen will suggest ways your fish products can be made more appealing to the public.

Recommend types of cans, lining, closures . . . advise you on all technicalities of processing.

Lithograph designing service by Canco merchandising experts to help your product attract customers and sell faster.

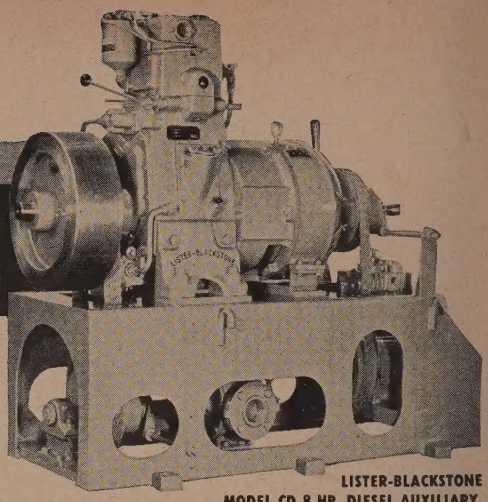
AMERICAN CAN COMPANY

New York • Chicago • San Francisco



OUTSTANDING SERVICE IN THE OYSTER FLEET!

Step aboard any oyster dredge working any Atlantic Coast beds from New England to the Gulf, and it's even money you'll find a Lister-Blackstone Diesel working too! *Mobjack*, owned by J. H. MILES & CO., Norfolk, is one of many such Lister-Blackstone equipped boats. When she was planned a Lister-Blackstone auxiliary was specified because of the superb record of one of these engines on *Fisherman*, an earlier Miles boat. Both engines are giving economical, trouble-free service, day in, day out—typical of Lister-Blackstone performance on many types of craft.

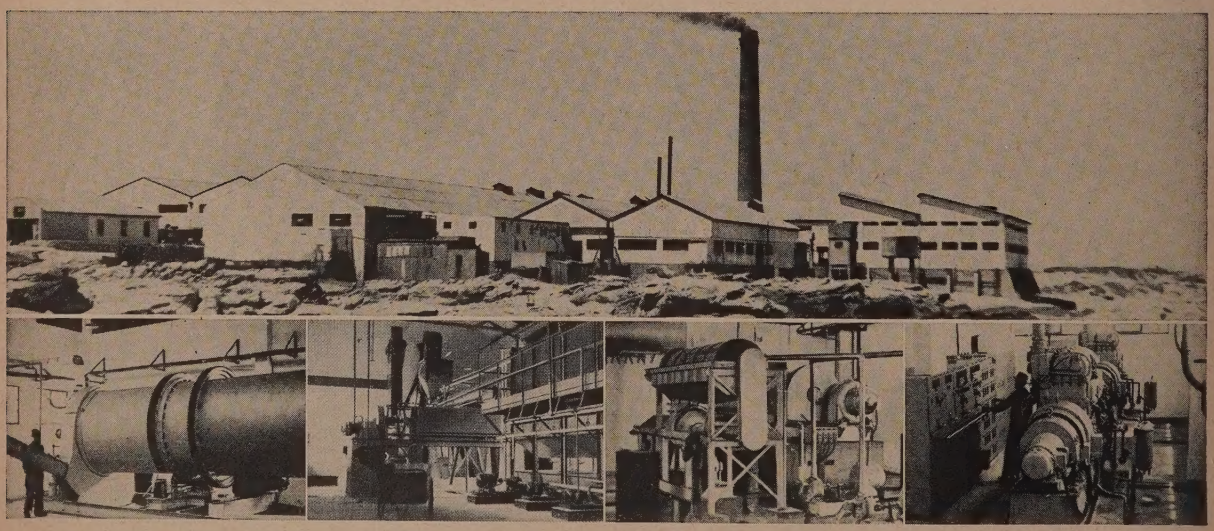


LISTER-BLACKSTONE MODEL CD 8 HP. DIESEL AUXILIARY, *typical of installation aboard 'Mobjack', driving 4½ KW generator, 60 GPM fire and bilge pump, and air compressor.*

NEW REDUCED PRICES GIVE BEST DIESEL VALUE FOR YOUR DOLLAR; better-than-ever Lister-Blackstone value. Write us your requirements. Address Dept. P.

Lister-Blackstone

LISTER - BLACKSTONE, Inc.
Factory, Sales & Service Headquarters: 420 Lexington Ave., New York 17, N. Y.
Parts Warehouses: MILWAUKEE, Wis., 3073 S. Chase St.;
BOSTON, Mass., Whesco Bldg., Fish Pier
Agents in BOSTON • NEW YORK • NORFOLK • NEW ORLEANS • MOBILE TAMPA • MIAMI • HOUSTON • NEWTON (Iowa) • SEATTLE • LOS ANGELES SAN FRANCISCO • SAN DIEGO • MONTREAL • TORONTO • WINNIPEG VANCOUVER • ST. JOHNS • EDMONTON
Sold and Serviced in 37 Countries Throughout The World



The cannery, and new reduction plant (on right), of the African Fish Canning Co., Ltd., at Lamberts Bay, South Africa.

ANOTHER STANDARD PLANT FOR AFRICA!

STANDARD has recently completed the above reduction plant in South Africa. There are now five STANDARD plants in Africa, evidence that a STANDARD plant's simplicity and economy appeal to profit-minded operators everywhere.

STANDARD IS THE world's leading designer and manufacturer of modern machinery and equipment for the fish processing industry. STANDARD manufactures complete reduction plants and fish canneries for all types of fish as well as the component units to modernize existing plants. Send for catalog—inquiries welcomed from all sections of the globe.

STANDARD STEEL CORPORATION

5013 Boyle Avenue • Los Angeles, California • Cable Address: STANSTEEL

BACK TO PORT *Faster* With GOOD NETTING

First back to port **means more than running free on the wind with all sails sheeted in hard on the port tack. Good netting — that hauls 'em in fast to the last fish — reduces "time out" faster than good weather, good navigation and good sailing combined.**

Good netting not only brings in bigger tonnage but it pays off handsomely in time saved . . . *money saved* on each trip out. Get back to port *faster* with . . .

- **SEA KING Seine and Trawl Netting**
- **STEEL GREY Linen Gill Netting**
- **SEA ISLAND Cotton Gill Netting**

Cotton Netting made from the famous Bibb's "Porterdale" Seine Twine

The FISH NET & TWINE COMPANY

310-312 BERGEN AVENUE, JERSEY CITY, N. J.

Pacific Coast General Representative: **DAVIS CORDAGE CO., San Francisco and Los Angeles**

PACIFIC COAST DEALERS

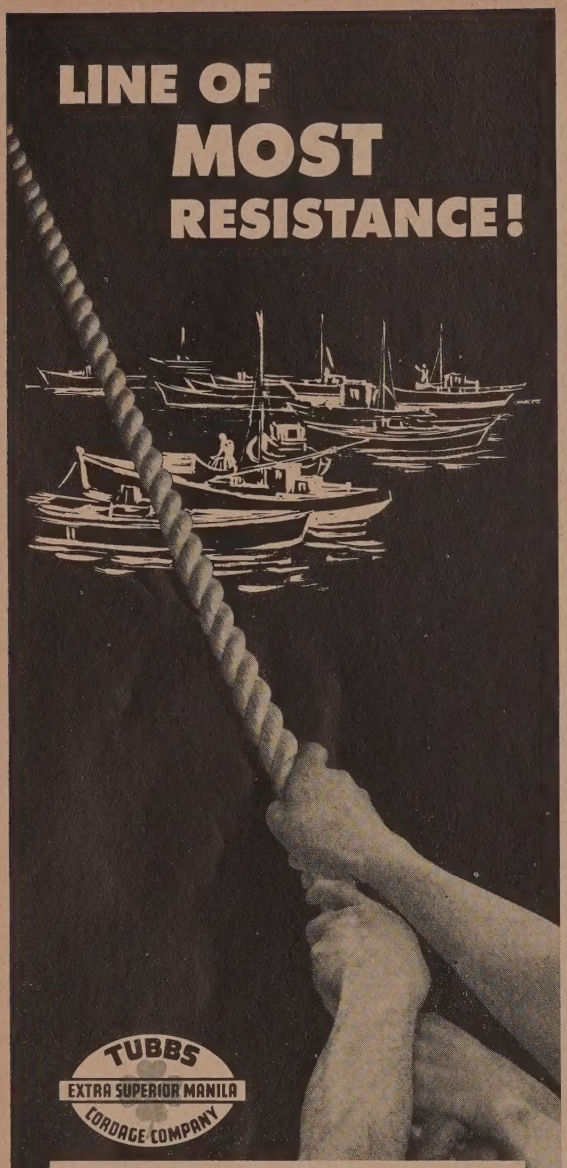
Fisheries Supply Co.
Seattle, Wash.

Island Marine Supply Co.
Terminal Island, Cal.

Fishermen's & Ships' Supply Co.
San Francisco, Cal.

"Serving the Fishermen's Needs for Over 100 Years"

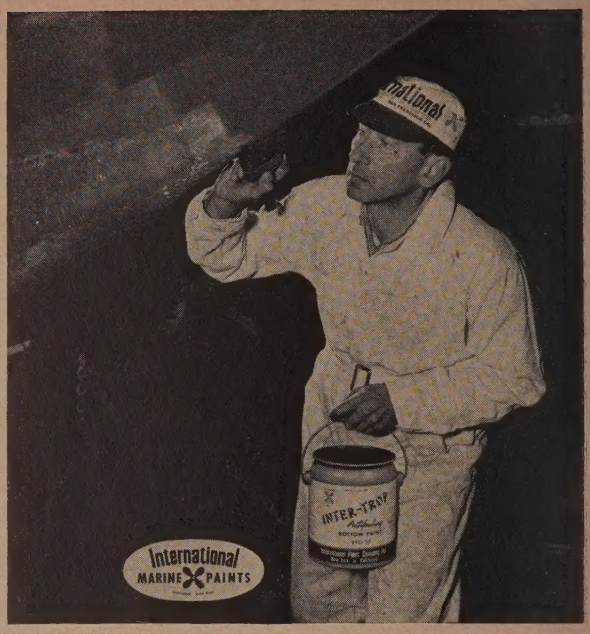
LINE OF MOST RESISTANCE!



For resistance to the rough handling and hard usage of fishing operations, nothing can surpass high quality Manila rope. Extra Superior Manila rope has earned the respect of fishermen because of its ability to "take it" under all conditions.

Extra Superior Manila rope is an exclusive product of Tubbs Cordage Company, manufacturers of high quality fishing and marine rope for more than 90 years.

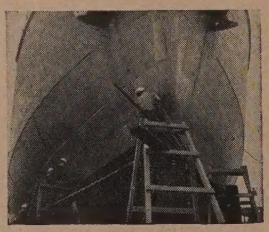
TUBBS
CORDAGE COMPANY
SAN FRANCISCO, SEATTLE, Portland, Los Angeles
Chicago, New York



The Paint That Saves You Fuel

INTERNATIONAL BOTTOM PAINTS do keep bottoms clean. They are therefore, bound to save on fuel bills. You as a boatman know that an ordinary coating of barnacles and grass can increase fuel consumption 10% or more. Furthermore, INTERNATIONAL Bottom Paints are lasting. They offer protection to the bottom and retain their antifouling properties far longer than ordinary paints.

There are several INTERNATIONAL Bottoms made to meet the various types of service and price limitations. Each is the outstanding paint of its kind. Send for color cards and price lists.



FOR METAL BOTTOMS

INTERNATIONAL has developed a combination of a primer and an antifouling paint that offer the maximum protection and preservation of metal bottoms. Send for the two circulars, "INTERLUX SILVER PRIMOCON" and "INTERNATIONAL INTER-TROP No. 50".

International
ANTIFOULING
BOTTOM PAINTS

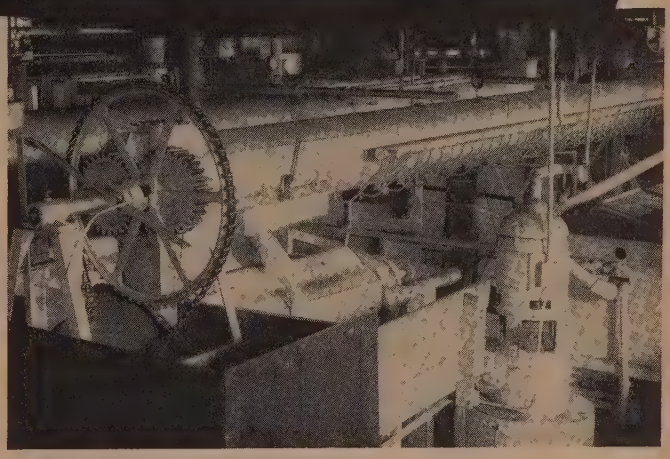
International Paint Company, Inc.
New York 6, N. Y., 21 West Street
San Francisco 7, Cal., 901 Minnesota St.
New Orleans 13, La., 315 Girod Street

International Paints (Canada) Ltd.
Montreal, Quebec, 6700 Park Avenue
Vancouver, B. C., 101 Powell Street

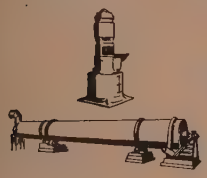
AGENTS IN EVERY PORT

ENTERPRISE *Quality Fish Reduction Plants*

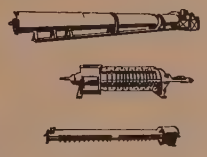
Enterprise Processing Equipment, backed by more than 62 years of engineering and manufacturing experience, has been developed to operate with utmost dependability and to produce uniform processed material of desired quality. Enterprise engineers, who have planned leading fish reduction plants throughout the world, are nearby to serve you well. Before you build, expand or remodel, write for engineering analysis and recommendation, with detailed information on Enterprise products.



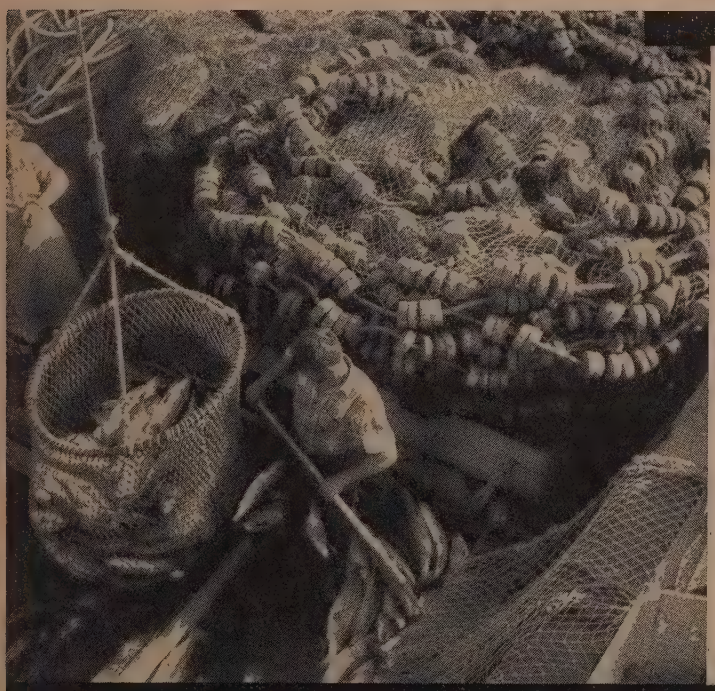
SERVICE • QUALITY • DEPENDABILITY



SINCE 1886



ENTERPRISE
PROCESS MACHINERY
ENTERPRISE ENGINE & FOUNDRY CO.
18TH & FLORIDA STS., SAN FRANCISCO, CALIF.
Offices in Principal Cities



PROFITS in production "calls" for PAULS QUALITY NETTING

Yessiree . . . you can always bank on PAULS NETTING! During those moments when you are using all your own strength and skill to pull in peak hauls . . . when your future profits are practically hanging in the balance — it is good to know that you can depend on PAULS NETTING.

Every detail in the design and construction of PAULS NETTING has been calculated to do the one job a quality net is supposed to do—and PAULS NETTING does that to a "T". Yes, PAULS NETTING holds up under even the severest strains — and helps you pull in that pay-load you're out there working for . . .

PAULS *Fish Net Company*
MAIN OFFICE: 357 WEST OHIO ST., CHICAGO, ILL.

PAULS NETTING

How WE SERVE FISHERMEN, PACKERS, FLEET OWNERS

The marine industry profits in these three important ways

QUALITY PRODUCTS . . . EXPERIENCE

The fisherman, the fleet owner, the packer profits by our more than 52 years of specialized experience in selecting and distributing products of sound merit.

STOCKS . . . DELIVERY

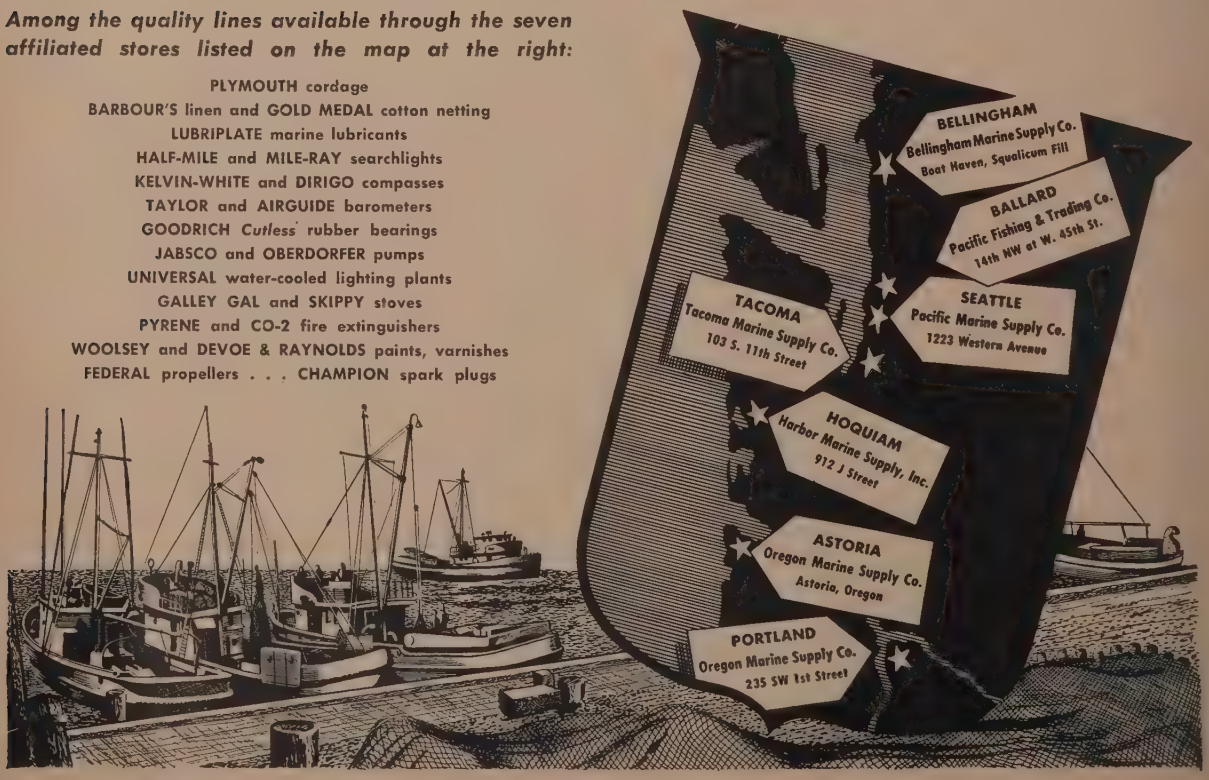
Ample stocks are maintained, or quickly available, to expedite delivery, and to meet requirements, no matter how large and complex the order.

AND MORE SERVICE

Reliable "on the spot" technical recommendations and service facilities are provided, to supplement the service and engineering skill of manufacturers.

Among the quality lines available through the seven affiliated stores listed on the map at the right:

PLYMOUTH cordage
BARBOUR'S linen and GOLD MEDAL cotton netting
LUBRIPLATE marine lubricants
HALF-MILE and MILE-RAY searchlights
KELVIN-WHITE and DIRIGO compasses
TAYLOR and AIRGUIDE barometers
GOODRICH *Cutless* rubber bearings
JABSCO and OBERDORFER pumps
UNIVERSAL water-cooled lighting plants
GALLEY GAL and SKIPPY stoves
PYRENE and CO-2 fire extinguishers
WOOLSEY and DEVOE & RAYNOLDS paints, varnishes
FEDERAL propellers . . . CHAMPION spark plugs



TUNA PACK PEAKS IN '49

Despite Restraints, Output Nears Record

New record in California tuna production was forecast as possible by the industry's statisticians as this issue of *Pacific Fisherman* went to press.

As detailed below, they expected San Diego's tonnage to check-out just about the same as in 1949, while the Los Angeles area seemed sure to run ahead of the previous year by at least 4,000 tons.

Los Angeles Area Tuna Well Above 1948 Tonnage

Tuna canneries in the Los Angeles-Long Beach district had received to the end of November as much tonnage as in all of 1948,—54,000 tons. With contract clippers and seiners hurrying home for the holidays it was expected the district would flume probably another 4,000 tons.

November saw 3,425 tons delivered, the breakdown being: Yellowfin, 2,136 tons; Bluefin, 1; Skipjack, 1,132; Albacore, 57; bonito, 6 and yellowtail, 93 tons.

The addition of the November pack of 163,101 cases brought the year's total to 2,329,552 cases, which was practically the same as the gross production of all of 1948.

An all-time record for a tuna delivery at Los Angeles harbor was the estimated 550 tons unloaded by the *Scarlet Queen* at French Sardine Company. Another large fare was flumed by the converted steel clipper, *Santa Helena,* 335 tons.

Return of late-year purse seiners, mostly from Central American waters, showed that 196 trips were made by seiners of the Fishermen's Cooperative association. Only two seiners sailed in December, the *Arlene S* on her fifth trip of the year, and the *Sun Beam,* completing a cruise which was interrupted by breakdown during the summer. During the year of 1948 seiners of the San Pedro Co-op paid the Mexican government $379,875 for licenses. In 1949 the amount was less due to smaller number of sailings.

San Diego Tuna Volume Even-Up With 1948 Catch

By mid-December it was becoming apparent that San Diego's raw fish tonnages for 1948 and 1949 would be about a standoff, around 96,000 tons, all grades. By the end of November this year was running 8,000 tons ahead of the previous year to date, but it seemed to be sure the southern port could not receive more than 6,000 tons for December, whereas in December last year the six canneries flumed 14,560 tons. Thus the two years' tonnages are equalized.

During November around 70 clippers reported, to be immediately inactivated for periods from 60 to 90 days. The month's total of raw fish was 6,770 tons, the breakdown being: Yellowfin, 4,063 tons; Skipjack, 2,519; Albacore, 173; bonito, 5; yellowtail, 10.

Novembers' production at San Diego was 289,769 cases, and brought the 11 months' total to 3,698,552 cases as against 3,420,040 cases for the same period in 1948. However, last year the port packed over 550,000 cases; this December could hardly be expected to top much over 250,000.

The pack breakdown at the southern port was: ¼s-48, 26,044 cases; ½s-48, 246,859; 1s-48, 6,004; 4-lb.-12, 3,155; ½s K.O.-48, 7,707.

Late Yellowfin Run Is Heavy

The end of the year raw tonnage was greater than had been expected, due to a sudden heavy run of Yellowfin at the Galapagos Islands after

the late fall months had seen poor fishing there, and this mostly Skipjack. However, after a slow October, sales of canned tuna over the national market increased materially in November.

With brisk demand, Southern California packers began examining their potential stocks in the spring, particularly in view of intention to hold contract fleets in port until after the holidays; therefore little or no production could be expected in the first two months of 1950.

It was then decided by the major packers to begin releasing their clippers on a staggered schedule, based on varying periods in port, following the final trip of 1949. Van Camp Sea Food Company announced a 60-day idle period for all its 75 clippers, regardless of size. On November 22 the *Picaroto* was eligible to sail and did. Others became free to sail and by the holidays the company had a number of vessels at sea. Others in its fleet elected to stay in until after at least the Christmas holiday.

May Resume Price Discussions

Sun Harbor Packing Company announced schedules as follows: Vessels 50 to 100 tons, 60 days; 100 to 160 tons, 75 days; 160 tons, up, 90 days. Westgate would send its fleet south after 75 days in port; High Seas had 60 days in force; others were sending vessels to sea according to requirements.

The prevailing basic raw price of $310 per ton, Yellowfin, continued in force, but it was understood that, with the agreement terminating December 31, individual price negotiations would probably be opened. All clippers at sea, however, would be protected, should there be a raw-price change. By December 15 there were at least 50 clippers at sea, but no more than a dozen were expected back before the end of the year.

The run at Galapagos started November 15 at Union Rock, south end of Isabella Island. (The great run of 1948 began earlier and located at Cape Berkeley of the same island, but 60 to 70 miles away.) No less than 40 clippers fished the run, as well as a number of purse seiners, although the latter got the fish in the less turbulent waters at Banks Bay.

Australia Shipping Tuna Canned and Frozen to U. S.

Samples of canned Australian tuna have been sent to the United States, and a commercial shipment of frozen tuna was sent to North America in the liner *Aorangi*, from Sydney.

This shipment—30 tons of round fish—was unloaded at Vancouver and transhipped to San Francisco, where it will be canned for domestic consumption.

Australian authorities are optimistic about the industry's possibilities because of the popularity in America of canned tuna.

Many American visitors claim Australian tuna, which usually weigh between 20 and 35 lbs., is comparable with the Pacific Coast Bluefin tuna.

The Pacific Ocean along the New South Wales coast south of Sydney has been reported swarming with tuna during the last two years. Fishermen, who need fish only up to four miles off shore for profitable catches, say that tuna schools often cover acres of water surface. They are most plentiful from early August until late November.

Tuna are fairly plentiful in Tasmanian waters from December to June, but are immature fish with jaws too weak to hold on trolling hooks.

Although New South Wales fishermen are seriously exploiting tuna fishing for the first time this year, 30 boats are already at work. A four-months' season is planned. Next year they will fish for tuna for six months if the fish can be sold in the United States.

In recent weeks New South Wales fishermen caught more than 500 tons of Southern Bluefin tuna (Thunnus maccoyii), most of which went to Australian canneries at Narooma and Eden, 200 and 350 miles south of Sydney, controlled by Green's Products Ltd., Sydney food processing firm.

This firm has canneries, jetties, cold stores and other equipment worth about $600,000 and is capable of handling big tuna catches.

Although Australians have not yet acquired a taste for canned tuna, 15% of the firm's output is being held back for the Australian market, in an attempt to create a demand.

The fish is not very suitable for the fresh market and very little finds its way into Australian shops, but many tons are bought each year by ship-provisioning firms at market prices ranging from 4c to 6c a pound.

Problems to overcome in setting up the Australian tuna industry include a shortage of suitable fishing vessels and an acute shortage of labor, according to advices direct from that continent.

'COPTER SPEEDS TUNA TRIP

His trip to the Galapagos Islands shortened by at least a month, Capt. Joe Machado returned the big steel clipper *Espirito Santo* to Van Camp Sea Food Company, San Diego, in mid-November with another near-capacity fare of Yellowfin and Skipjack.

According to the skipper, his 88-day round trip would have been greatly extended without the use of a helicopter for bait and fish scouting, first time this aid to tuna fishing had been employed. The clipper's crew was able to work four or five schools a day because of the helicopter's aid.

Furnished by United Helicopters, Palo Alto, and named for Van Camp's top tuna brand, "Chicken of the Sea," the machine was piloted by H. R. Watson, and had John Grove, the clipper's expert mast man, aboard on most of the scouting flights.

SARDINE STRIKE SETTLED

Southern California's sardine fleet resumed fishing again Dec. 16, ending a tie-up that had idled 150 seiners and some 1,900 fishermen since Nov. 8. Both CIO and AFL fishermen climbed aboard the seiners as a result of a settlement worked out following numerous meetings.

The tie-up came when the CIO's proposal to establish a central committee to exercise control over the fleet and establish limits on an equal basis for all, was rejected by both the owners as represented by associations, and the canners.

Under the proposal the union would have set up a plan whereby the canners would have had nothing to say as to the disposition of their own contract fleets, and would have had daily to order the tonnage they required from the union, which would then have allocated certain vessels to deliver. The packers were adamant in refusing to accept this, both on business and legal basis.

Settlement is 3-Ply Deal

Basis of the settlement, which came after it had been practically decided the season was over, was (1) redistribution of vessels, (2) agreement on tonnage limits, and (3) assurances against fluctuation of raw price, $32.50 per ton.

In November 13 vessel owners brought suit against the the union on basis of breach of contract, but no decision resulted.

One of the points of agreement had to do with mixed loads of sardines and mackerel. Catches of sardines containing 15% of mackerel were considered mixed fish. If mackerel catches contained more than 25% of sardines this was considered mixed fish. Sale price then was to be worked out between vessel owner and canner.

Tonnage agreement was: Each canner to start with a minimum limit of 50 tons for each vessel, and this could be raised on an equal basis to 65 tons. When all canners raised to 65 tons—if demand for the raw fish made it necessary—then a packer could have a 20-ton optional spread upward. Should all canners raise limits to 85 tons, then an individual could raise to any limit above that.

Vessel owners and union were given the right to observe operation of the tonnage system. Should any canner quit taking fish, his vessels through voluntary cooperation were to be absorbed by other packers. The agreement was to remain in force until the end of the 1949-50 season, Feb. 1.

Fishing stopped when the season had produced 94,568 tons, and packers had produced 1,286,775 cases. Resumption of fishing brought to light a rather paradoxical situation. The total pack to the end of October for both Southern and Northern districts of California was 2,336,871 cases, nearly twice the total pack for 1948-49 season to that date.

With foreign markets so restricted —for example the best sardine market, the Philippines, on Nov. 30 ordered imports of canned fish for 1950 to be only 50% in dollar value of the 1948 imports—beginning Dec. 1, 1949—the industry generally considered it had enough canned sardines on hand to satisfy this and the domestic market. Yet, apparently most of the large packers were anxious to get their fleets started again.

One condition was evident: What canned sardines remained in packers' hands as of mid-December were very firmly held; prices were also firming. Quotations made to the trade before the season opened, Oct. 1, were: Talls, $4.50; ovals, $6.00. This dropped immediately after the season opened and important tonnage was brailed, to $4 and $6, with, of course some sales under this price. Most packers believed that quotations would increase with first of the new year business.

Monterey Sardiners Hope For Renewed "Winter Run"

As the December light of the moon ended northern California sardine fishermen were hoping for a "winter run" of sardines which in normal times provide about 20 days of fishing in Monterey Bay, and north.

First nights of fishing in the December dark produced some excellent catches, particularly in the region "off the Cement Plant" to the north of Moss Landing.

November's total, 19,437 tons of sardines, was the lowest monthly catch at Monterey since August. During most of the month seiners made their sets off San Luis Obispo, and spent 10 to 12 hours on the trip from Monterey to the fishing grounds.

The season's total at Monterey had reached 117,704 tons, and at San Francisco was more than 14,000 tons. This is the largest catch since the winter of 1945. Fishing will continue until Jan. 15 for the current season.

Fishing was unsatisfactory in Monterey Bay during the month because of a large number of anchovies mixed with the sardines. Best catch during the month of November by Monterey boats was on the 16th when 3,094 tons were netted.

Horace Mercurio, veteran purse seine skipper and manager of the Monterey Purse Seine Association, boat owners' group, feels that if the limits that have been imposed on the Monterey fleet had not been in force there would have been twice as many fish landed this season.

Mr. Mercurio points out that during the first three months of the season fishermen were giving away fish to other boats, to give them the limits.

"There was no waste of fish," said Mr. Mercurio. "The sardines are back. They are plentiful, and the feed is back. They are not two years old but range all the way from three to six years of age, being from 9 to 14" long. Also fishermen don't catch the same size fish all the time—some are fatter than others."

Officers of the Monterey Purse Seine Association are Frank G. Cardinale, president; Sal Colletto, vice-president; Horace Balbo, secretary; John G. Spadaro, treasurer; and Horace Mercurio, manager.

For the season to the end of November some 75,672 cases of sardines had been packed in San Francisco, as compared to 1,545 the season before; 1,465,428 cases in Monterey as compared to 516,458 the season previous; and 1,301,386 in San Pedro, as compared to 1,115,830 for the season before. The total pack for California was 2,842,486 cases as compared to 1,633,833 cases.

SALMON RESEARCH

The Parts Played by the Scientist, the Industry, the University, And Its Advisory Board

By WILLIAM F. THOMPSON

An informal discussion by the Director of the Fisheries Research Institute, University of Washington, at the 10th annual meeting of the Alaska Salmon Industry, Inc., Seattle, Nov. 29, 1949.

You are beginning to know me as a human being rather than as a scientist. That is, of course, a dangerous situation. It is not one that I willingly see come about, because it is my hope that you can keep clearly in mind the advantage of using scientists and scientific method, rather than personalities, in your business.

My own reactions, in defense of the independence and freedom of thought so vital to good research, are often instinctive and seem even to me at times as personal peculiarities and most non-cooperative ones. They present a problem to me which has led to some attempts to formulate the principles, or ethics, of good research; and their relationship to you as business men. They will be tried out on the Advisory Board, if they have the patience.

The weight of the relationship of the University, through the Fisheries Research Institute to you, has been placed with the Advisory Board. They have the burden, not only of interpreting the scientist and the University to you, but of correctly handling and applying the results; which may have to be handled with care. This is the first time that biological research has been directly supported by the industry, and the first time that a board has been given such a task. It is a task which seems to me of great importance, which should give you access to the scientific and technical knowledge you must have to present your case for proper regulation, as well as conduct of your business.

The burden of my talk today, therefore, is the Advisory Board, simply to emphasize its importance in our research projects. The time is already here in Bristol Bay and Southeastern when it must be called upon for help. It is, by choice of the University itself, an effective body, not a figurehead.

We might glance for a minute at the organization with which it must deal. The universities are old hands at research. They have found by long experience the solid foundation upon which research must be based to be effective and acceptable. Your Advisory Board has the somewhat difficult task of reconciling this foundation with your business needs.

The University stands for the pursuit of truth, of fact. In this technological age these facts have come to have tremendous weight, both in actual productive operations and in governmental control of them. The University can give you access to this technical world, and to technical experts; but it can only do so effectively if it preserves the integrity of the scientific method, its impartiality.

It must also concentrate its attention on fundamental problems. If we do not solve those you will be exactly where you were 50 years ago. During the past year stream surveys have been conducted in Southeastern Alaska. These were made on the assumption that there is a direct correlation between escapement and return two years later. But the fundamental problem is whether this correlation exists, not how perfectly you can collect figures on catch, escapement and return. It is fine to be efficient. That enables you to go farther and faster, perhaps in the wrong direction. The University wants to concentrate on the direction in which we are going, not on how fast we go.

The good scientist is conservative in letting go of his facts. He often has to be pried loose from them. But please sympathize with him. Proper research means following unknown paths with intelligence, and with constant recasting of direction, and return to the basis of departure. The scientist must be in a position to return to his first raw data, and revise its scope and bearing, so that it covers the case fairly; and it is a great day to him when he feels sure of this. It should be of concern to you, because if results are to be effective, perhaps used against your present practices, you of all people should be sure that the basis of decision is complete and adequate. You will pay for errors. So the Advisory Board should have a special interest in helping the Fisheries Research Institute complete its basic data before it is issued.

The University has also certain standards to meet. In case great financial interests are at stake, as appears true in Bristol Bay for instance, the University must be sure that its action is correct. It will therefore, submit its findings to the interested parties, namely, the Advisory Board, for any criticism or suggestions. That does not mean weakness or timidity; it merely means fairness. It means that the whole significance of the raw data should be explored. To explore the significance, and the application, is a separate and distinct phase of any experiment.

The closer we get to the final formulation of significant results, the closer mouthed I must become. And the more significant they are, the more carefully they should be handled. That is as you should wish it. I hope I have the ability to keep my conclusions to myself, from you as well as from my own staff, until I know I am not talking nonsense. And even then they should meet the acid test of the opinions of fellow scientists, and particularly of your own Advisory Board.

The temptation is to get up here today and make some big statements. Knowing my own weaknesses, these occasions are sources of worry to me. I know that is not the way real accomplishments will come. They will come in their own way, tested and revised and proved. They will come only when many men have added their share, however sound our initial work may prove to be. Your Advisory Board must contribute its share to this. They will find that appreciation of the significance of facts; and working out methods of their presentation, acceptance and use, are as great tasks as are the efforts of the re-

search men themselves. In that sense your fate is in your own hands and in those of the Advisory Board.

We are going to discover that the Advisory Board and scientists are very human. Because of that, Dean Guthrie and I have spent some time considering these basic problems of standards of administration and use of research. In our scientific way we may lay what appears to be very heavy emphasis upon standards of thoroughness and impartiality, upon freedom of initiative and thought. We may be impatient of compromise and so-called cooperation when these weaken the basis for success. But after all, you ask solution for problems that have plagued you for 50 years, problems that have been attacked by good men who could not work under the standards we are insisting upon today. And if our method of approach has shown itself so capable of results elsewhere in our civilization, surely it is worthy of a fair trial here.

We hope you will hear any direct conclusions first through your Advisory Board. It is a very real one, as far as we are concerned, and we hope it will succeed in its task. The Board must, by its very nature, have much of the responsibility for the contacts of myself and staff with you.

Irrespective of the specific results of our research, which we feel proud of, your Advisory Board has a task worthwhile in itself, to devise balanced and effective means and methods of using science and scientific methods for the welfare of your industry and the public it serves.

NOTE — Members of the Fisheries Research Institute Advisory Board referred to by Dr. Thompson are:

Aubin Barthold, Alaska Packers Association, chairman; E. M. Brennan, P. E. Harris & Co., president of the Association of Pacific Fisheries; A. W. Brindle, Wards Cove Packing Co. and Red Salmon Co.; Lawrence Calvert, San Juan Fishing & Packing Co.; H. B. Friele, Nakat Packing Corp.; Guy V. Graham, Libby, McNeill & Libby; J. A. Green, Pacific American Fisheries, Inc.; W. C. Arnold, managing director Alaska Salmon Industry, Inc.; Dr. E. D. Clark, director Northwest Branch, National Canners Association, and secretary Association of Pacific Fisheries.

MRS. AMELIA GUNDERSEN, Ketchikan, wife of the owner of the veteran herring seine boat *Pirate,* has announced her candidacy for re-election to the Alaska territorial house of representatives. She is a democrat.

Bidding on a Bargain

Uncle Sam's investment of $3.75 million in the *Pacific Explorer* drew a high-bid of only $120,000 when tenders for purchase of the vessel were opened in Astoria in December.

One bidder thought a price of $1,150 for the vessel would be about right. He was a gentleman named German Fernandez Concha, and he hails from Peru.

Top offer came from Tangiers, Morocco, with S. A. Zaban offering $120,000.

Moore Drydock Co., Oakland, was willing to pay $1,800 on a deal which would permit the vessel to be resold to alien interests.

The U. S. Maritime Commission was not expected to decide what to do about the matter until after the first of the year.

Some federal officials are known to be opposing sale of the vessel on any of the bids received. One has stated that there are more than $120,000 of salable stores in her lockers.

When bids were first called some weeks ago no offers whatever were received.

Here's the Bad News On Philippine Fish Trade

Gloomy prospect of a 200,000-case annual export business with the Philippines—instead of the 945,000-case trade of the first 10 months of 1949—faces the American sardine operators as result of the Philippine import quota which went into effect Dec. 1, 1949.

Under the new quota, imports for the 12 months beginning Dec. 1, 1949, will be limited to 50% by value for sardines and 20% by value for all other edible fishery products imported during 1948.

On the basis of a 1948 import trade from all sources in the amount of $14,155,000, the Department of Commerce figures the Philippine imports for the twelve months beginning with December will be limited to $3,789,500.

Under this quota, imports of sardines, *from all sources,* will be limited to $1,597,500. They were valued at $3,195,000 in 1948.

The Philippines in 1948 imported $1,219,500 in canned salmon. This business is being cut down to $243,900.

Canned mackerel imports for 1948 were $6,510,500. In the current twelvemonth they will be limited to $1,302,100.

American sardine packers' share of the $3,195,000 sardine imports into the Philippines in 1948 was $2,275,000. Other principal suppliers in 1948 included: Canada, $561,500; Mexico, $320,500; Portugal, $38,000.

Bureau of the Census figures show that during the first 10 months of 1949 the Philippines took 56% of all American exports of sardines, 46% of the exports of canned mackerel, 6% of the exports of canned salmon, and a like percentage of the foreign business in canned tuna.

Canadian Import Trade Still Strong at Seattle

Imports from Canada continued to run high in the fish trade at Seattle going into December. For the first week in that month the import business accounted for one-third of all the fish received at Seattle from any source.

Moreover, the Canadian imports were more than six times as great as those for the corresponding week of 1948. They accounted for 373,000 lbs., of which Chum salmon alone, both fresh and frozen, totaled 294,000 lbs. In addition, imports included 60,000 lbs. of frozen halibut.

HARALD SYNNESTVEDT, president of the New England Fish Co., and also of the National Fisheries Institute, returned to his Seattle headquarters Dec. 8 after several weeks in the Pacific Southwest. He remained in Southern California and Arizona after attending the convention of the Association of Pacific Fisheries at Coronado and the meeting of the Pacific Fisheries Conference at Los Angeles in November.

The Alaska Territorial Fisheries Board at its semi-annual session in Juneau late in November; left to right—Clarence L. Anderson, director; J. Howard Wakefield, Port Wakefield, Alaska; Chairman Ira Rothwell, Cordova; J. Valentine, Ketchikan; William R. Walton, Sitka; Karl Brunstad, Kodiak.

"Madhouse of 1949" Leads Alaska Fishery Board to Demand Longer Salmon Seasons

Bluntly characterizing the past season's experience in Southeast Alaska's salmon fishery as "the madhouse of 1949," the Alaska Fishery Board in a formal brief filed with the U.S. Fish and Wildlife Service Nov. 25 called for a gradual return to longer fishing seasons in that area.

The Board minced no words when it offered its program in these words:

"From the biological or fishery management viewpoint every effort must be taken to avoid the mistake of 1949. Without a doubt, many streams in Southeastern Alaska were overpopulated with Pink salmon this past season. Considerable numbers of these fish could just as well have been utilized by the canneries, perhaps with betterment of the prospects for 1951. The lateness of the opening in some districts resulted in a decidedly inferior canned product. In fact, in some instances operators refused to accept legally caught fish because they were so far advanced toward the spawning stage as to be unfit for canning. If predictions of a run in 1950 nearly equal to that of 1949 transpire, similar conditions will be repeated. Biologically speaking, it would seem much more advantageous to have a fairly steady seeding throughout a long season than an oversupply before or after a short season.

"The answer to these problems would seem to be a return to the longer seasons that were formerly in effect. It is realized that an immediate return under the old regulations might be disastrous, but by a gradual process and by proper changes in the regulations a long season should again be possible."

The board's proposal for the Southeast Alaska season of 1950 would be as follows, with fishing starting at 6 a.m. on each of the dates named and closing at 6 p.m. on the subsequent days of each period:

July 31 to Aug. 2, 3 days;
Aug. 7 to Aug. 9, 3 days;
Aug. 14 to Aug. 18, 5 days;
Aug. 21 to Aug. 25, 5 days;

This would be followed by a fall season:

Aug. 28 to Sept. 1, 5 days.
Sept. 25 to Sept. 27, 3 days;
Oct. 2 to Oct. 4, 3 days;
Oct. 9 to Oct. 11, 3 days.

Discussing its proposals, the Alaska board says further:

"It is believed that by opening on July 31 ample protection will be given the many local runs of Red salmon in this area. Many of these are already showing signs of recovery so perhaps it will not be too long before some of these could be tapped for some limited fishing during June and July. The number of days per week for fishing should be flexible and subject to decrease or increase as conditions may warrant.

"In order to make this plan successful some further restrictions must be made on trap fishing, especially the manner of closing traps during periods closed to fishing. The present regulations call for the removal from the water of all other types of fixed gear. This it is recognized would not be practical for traps but the present method of lowering 25′ of the heart walls on each side of the pot is not satisfactory from either the escapement or enforcement angle. It is a well known fact that under present methods of closure there is a definite holdup of the salmon at each and every trap, which may vary from a few minutes to several hours depending on tidal conditions. Where there are a number of traps in the migratory path of the salmon this cumulative holdup may be enough to destroy the entire value of the week end closure. It is therefore suggested that in addition to the openings in the heart walls now required by law, it should be mandatory to lift the outside wall of the pot and at least 50′ of the lead adjacent to the heart. Only by this or some other equivalent method can the salmon be assured of free passage through the maze of traps during the closed periods.

"The fall season should be open to drift gill net fishing as well as to purse seining. In addition to the bays that were open in 1949 there should be added Lynn Canal and any other bays that the Service feels could stand some limited fishing."

JOHN T. TENNESON, president of the Pyramid Fisheries Co., Superior Packing Co. and Columbia River Salmon Co., in December was elected to the board of directors of the Marine Bancorporation, Seattle. He was already a member of the board of the National Bank of Commerce, controlled by the Bancorporation.

THINGS FISHERMEN TRUST . . .

THE SHIP THAT MARKS SHOAL WATERS

THE NET THAT LANDS BIG CATCHES

For more than a hundred years men who fish America's seas and inland waters have trusted Gold Medal Netting. Ask your supplier, ask other net-wise friends—they'll all tell you "Gold Medal is the kind you ought to buy—it's got what it takes!"

GOLD MEDAL
The greatest name in netting

GOLD MEDAL NETTING means controlled production in our own plants, from the bale of cotton to the finished netting. This is your assurance of dependable quality.

Gold Medal Netting

Makers of Fine Netting for 108 Years

THE LINEN THREAD CO., INC., 116 New Montgomery St., San Francisco 5, Calif.
(Successors to American Net and Twine Company)

Pacific Coast Distributors: Pacific Marine Supply Co., Seattle • Oregon Marine Supply Co., Portland and Astoria • Cincotta Bros., San Francisco and Monterey • Marine Hardware Co., San Pedro and Terminal Island • Nuttal-Styris Co., San Diego • Cia Exportada de la Costa S. A., Guaymas, Sonora, Mexico.
Canadian Representative: Western Leckie Limited, Vancouver, B. C.

GOLD MEDAL SEINE TWINE—For hand-knitting, hanging and mending, get the same high-quality twine that Gold Medal Netting is knit from. Ask for and be sure you get Gold Medal.

Other Netting Products: AN&T Coy Linen Gill Netting • Gold Medal Sea Island Cotton Gill Netting • Barbour's Nylon Gill Netting • Plymouth Rope A Complete Line of Netting Accessories.

Power to Take the Tuna

Mike Elich, San Pedro, son of veteran fisherman Vincent Elich, has put a new power plant in his *Sun Beam,* all-brine tuna purse seiner. The installation is particularly noteworthy because it is the first Nordberg diesel engine to go into a fishing boat on the Pacific Coast. The 600-hp. diesel is supercharged, yielding extra power for the weight and space requirement. The engine is equipped with a 2½ to 1 Capitol reduction gear, delivering 600 hp. at 680 rpm., which is cut to 270 rpm. at the wheel, an 82 x 66" Doran. At this speed the vessel delivered 10.5 knots on trials.

Captain Elich owns the vessel in partnership with Dominic Roki of San Pedro and the Sun Harbor Packing Co., for whom the vessel fishes. She was built in Oakland and was first named *J. A. Martinolich.* Elich has commanded her for a year and fishes the vessel exclusively for tuna. Before taking over *Sun Beam,* he shared ownership in *San Francisco* and has fished on the old *Pacific.*

Sun Beam has three GM 60-kw. auxiliaries and is equipped with a 250-watt Pacific Electronics radiotelephone, a Fisher direction finder, and a Sperry Mark 14 gyro-compass pilot. Her all-brine refrigeration system will stow 150 tons of tuna, using two 6x6 Kohlenberger compressors. Ed Eckerly of San Pedro is engineer aboard the *Sun Beam* and with Charles Cox of the Nordberg Engine Co., supervised the vessel's trial run recently from the Todd Shipyards, San Pedro, where the engine installation was made and where the vessel was given an International paint topside job, with Triple C for bottom protection.

Using her brine tanks for fuel storage, *Sun Beam* has 32,000 gallon fuel capacity, with 4,000 gals. water, and 1,000 gals. lube oil. For operation of her tuna purse seine net she has a Northern 250-S winch.

Sun Beam is 101′ overall in length, with a beam of 26½′, and 195 gross tons. The vessel has eight cargo tanks. She can remain away from port with provisions for a crew of

Dominic Roki, left, and Captain Mike Elich, both of San Pedro, co-owners of *Sun Beam,* of which Sun Harbor Packing Co. is managing owner. *Sun Beam* was formerly *J .A. Martinolich* and has just been re-powered with a super-charged Nordberg diesel engine, rated 600-hp. at 680 rpm. Many oldtime fishermen will recall Mike's father, Vincent, who was one of the pioneer fishermen of San Pedro.

12 persons and full fuel capacity with normal consumption for 40 days continuous running or 90 days intermittent running. Farthest she has traveled from her home port of San Diego is to the Galapagos Islands.

The new Nordberg is a four-cycle, eight cylinder, 9½" x 11" diesel. It is a fully enclosed heavy duty engine designed for operation at medium speeds. It employs the Elliott Buchi system of turbo-charging and uses Capitol reduction gear of in-line planetary type which permits a lower installation of the engine.

The engine is started by compressed air and lube oil is supplied to the lubricating system by two oil pumps of the internal gear type driven from the crankshaft.

In order to effect the engine installation, the complete house top, crew's berths, furniture, piping, electric wiring and a portion of the main deck planking were removed ashore, prior to lifting out the old engine.

After removal of the old engine, the existing engine foundation was modified with a full length steel base with fitted chocks and new fuel, fresh water and cooling pipe lines were installed to conform with the new engine requirements.

After the new engine was set and aligned, all removals were replaced and painted as original.

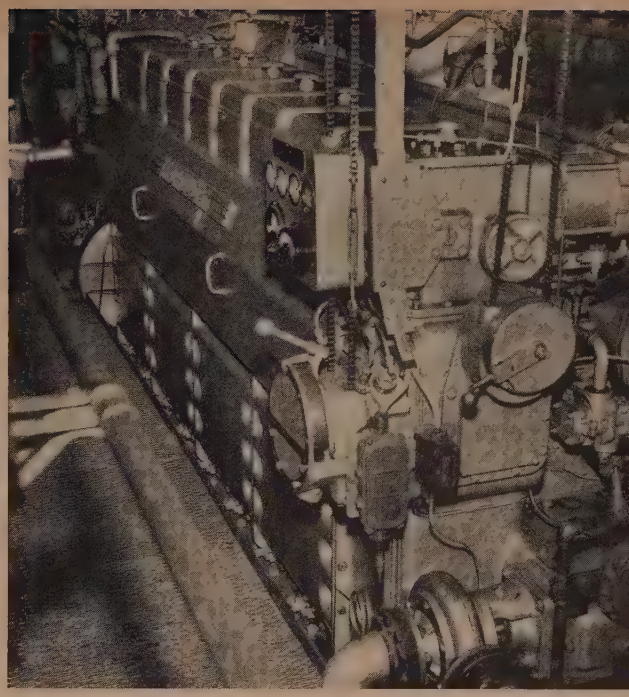
New operation controls were installed with manual stations located inside and outside the pilot house. The electrical alarm system which notifies the ship's personnel of low lube oil pressure on the main engine was modified and tested for the new operating conditions.

A new trolley track, 20' in length, was fitted over the main engine for lifting and stowing of parts during repair operations.

The *Sun Beam* was drydocked for underwater cleaning and painting, examination of the tailshaft and installation of a new propeller.

Aircraft Aid Clippers

Use of airplanes to make quick emergency repairs from San Diego to locations on the west side of Lower California is increasing. Two San Diego firms have planes in service. One of them Crofton Diesel Engine Company, Southern California distributors for General Motors 671 marine diesels, answered a radio call from the clipper *St. George* from Turtle Bay in early December. Within 24 hours the parts needed were delivered and installed, and vessel was putting to sea again.



***Sun Beam's* new Nordberg supercharged diesel, viewed from the control station at the forward end. In-line planetary reduction helps to keep the diesel low for engine room convenience and vessel stability. The Nordberg delivers 600 hp. at 680 rpm., cut to 270 rpm. at the wheel.**

SIX EUREKA TRAWLERS ENTER PROCESSING AND MARKETING

Owners of six of the largest dragboats working out of Humboldt Bay embarked upon a new venture recently when they organized the Humboldt Trawlers Association, using the facilities of the Tom Lazio Fish Company at Eureka as a base for both fishing and processing operations.

Members of the new concern are as follows: Oliver Stiles, owner of the *Sitka;* Fred Brown, owner of the *Bluefin;* Clarence Hubbard, the *Rogue;* Virgil Strong of the *Aloma;* Noel Franklin, owner of the *Andrew Jackson* and Gilbert "Gib" Hunter, owner of the *Dennis Gayle.*

The association will hire its own employees and manage its own affairs, with Tom Lazio acting as exclusive agent for the group. Floyd Bridges, formerly of the Theo Weissich Fish Company, has been named as general manager.

The six boats involved are among the heaviest producers in the bottom fish business on the Pacific coast, and the group includes some of the craft that have been dragging at extreme depths off northern California.

The operators hope to virtually double the present bottom fish capacity of the Lazio plant which they will use as their base. Among other operations, the association will pack and market the one-pound package of filleted fish under the "Shelter Cove" brand. Improvements at the plant include an additional fillet line in a closed room, an automatic package wrapper and a new operations office on the outer floor.

The Lazio firm proper plans to drop out of the bottom fish market but will continue to handle troller catches, longline boats, canning and kippering.

Nisei Form Company To Export Jap Fish

Authority has been granted for the formation and operation of a $1,000,000 corporation financed primarily by Japanese residents in the United States and Hawaii for the purpose of producing fish and other food in Japan for export frozen to the United States.

Out of the company's capital, $393,000 has been allocated for fishing equipment and $261,000 for fishery operating funds.

Beside fish production and export, the company's principal activity will be in raising and freezing poultry for shipment to the United States, according to the official announcement through U. S. consular channels.

H. V. McGEE, superintendent of the Ketchikan Packing Co., returned to the company's Seattle headquarters Nov. 10 after a long season in Alaska, having gone north early in April. He expects to remain until spring.

Mr. Krug's Last Act

On his last day as Secretary of the Interior, Julius A. Krug did some things he had repeatedly declared he would not do—among them being the signing of an order creating a 100,000-acre reservation for the Alaska Indians of Hydaburg.

Other reservations were also created in the interior of Alaska, locking-up mineral areas in contravention of Mr. Krug's oft-repeated pledge that he would not order such reservations.

According to Charles R. Carry, director of the Fishery Products Division of the National Canners Association, writing from Washington, people there are asking:

"Did Secretary Krug actually know what he was signing?"

This question is prompted by the fact that the order says, in part: "And provided, further, that if the Supreme Court of the United States shall decide the pending case of Frank Hynes vs. Grimes Packing Co., et al., . . ."

The Supreme Court handed down its decision in the case cited in the order on May 31, 1949, six months to a day before Secretary Krug signed the order.

Creation of the Hydaburg reservation was announced twice before by the Department of the Interior, the first time on Oct. 16, 1947, but the announcements later were withdrawn when Mr. Krug said he would not sign the order.

Finally, as he bowed out, he *did* sign it.

FROZEN FISH FREIGHT RATES CUT

Good news on freight rates—the first news of that kind on that subject in a long while—was received recently by E. A. Ruthford, chairman of the Northwest Fish Traffic Committee, as well as of the National Fisheries Institute's traffic committee.

The Freight Traffic Managers Committee of the transcontinental railroads have approved the request of the Northwest Fish Traffic Committee for a reduction in rates on frozen fish from the Pacific Coast to destinations as follows:

New York, Boston, Philadelphia, Washington, from $3.38 to $2.70;

Pittsburgh, Cleveland, Columbus, Buffalo, from $3.11 to $2.43;

Detroit, Indianapolis, Cincinnati, Nashville, from $2.81 to $2.30;

Wisconsin, Illinois and Northern Michigan including St. Louis, Chicago, Milwaukee, Des Moines, from $2.67 to $1.75;

New Orleans, Memphis, Louisiana, Mississippi and Arkansas, from $2.65 to $1.75;

Minneapolis, Duluth and Wichita, from $2.21 to $1.75;

Denver, Pueblo and Colorado Springs, from $1.80 to $1.75.

Under the proposed changes the minimum carload is being increased to 36,000 lbs. on ordinary refrigerator cars; and to 46,000 lbs. on those exceeding 2,200 cu. ft. capacity.

Calif. Salmon Pack

Ocean Picnic Sportsmen's Cannery, Eureka, of which Paul Thurmond is the owner, packed some 50 cases of salmon last year, and about 250 cases of Albacore.

Eurekans Buy Fish Reduction Floater

The sardine reduction barge *San Pablo,* operated off Parr-Richmond Terminals, Pt. San Pablo for many years by the late E. M. Darrimon, has been sold by the trustees of his estate to Maritime Industries, Eureka, Gilbert Hunter, and Hermann Foland, partners.

The *San Pablo* will continue to reduce sardines until the end of the season, when she may be towed to Eureka to be used to reduce whale and fish offal.

Natives Buy Kake Cannery; Deal On for Klawock

Purchase of the Kake cannery, owned since 1940 by P. R. Harris & Co., by the native Indian community of Kake, Alaska, was announced Dec. 15 by Don G. Foster, area director of the Alaska Indian Service, and Frank Johnson of the village council.

At the same time it was announced that an option on the Klawock cannery of the Demmert Packing Co., held for the past year by the Indian Service for the natives of Klawock, on the central west coast of Prince of Wales Island, would probably be taken up on or soon after Jan. 1.

The deals are handled with federal funds loaned under the Indian Reorganization Act, which the natives undertake to pay off in ten years. The Kake purchase includes, in addition to the cannery, nine nearby salmon traps in the Frederick Sound section. The Kake natives number about 400, among whom are owners of some 20 fishing boats.

The Kake cannery, though not operated for the last three seasons, is a large, well-equipped modern plant, located near the northwest point of Kupreanof Island, 56 miles west of Petersburg. For some years prior to 1940 it was owned by the Alaska Pacific Salmon Co., and before that by the Sanborn-Cutting Co. of Astoria.

The Klawock plant has been operated in recent years under lease by Libby, McNeill & Libby, whose lease continues through the 1950 season.

New Cold Storage Ups Vancouver Capacity

Opening of the big new plant of B.C. Ice & Cold Storage Ltd., on the Vancouver waterfront this fall gave the British Columbia city greatly increased facilities for handling frozen fish.

President of the company is Senator S. S. McKeen, and general manager is R. J. Gosse, whose family has for many years been identified with the fishing business. Among the directors is L. B. Bing, manager and director of J. H. Todd & Son, Ltd., Victoria.

The quick freezers at the new plant can handle 350,000 lbs. of fish every 24 hours. There is storage capacity for 24 million lbs. of food. 23 tons of ice can be manufactured daily and ice storage is for 1300 tons.

Canada's Industrial Development Bank assisted in the financing of the project.

FRASER SOCKEYE ENTERPRISE ENTERS NEW PHASE—

Re-Stocking Barren Waters

Although not entirely completed, the Quesnel field station of the International Pacific Fisheries Commission in the Cariboo district of British Columbia, was placed in operation last fall, representing one of the year's important developments in the long-term program for restoring the Fraser River's Sockeye.

The unfinished units of the hatchery, such as the 15 rearing ponds and cold storage facilities, will be available as needed.

The Commission considered that the operation should be initiated this year, since the 1949 Sockeye cycle has a wide range of races, each in sufficient numbers to permit small egg transfer, which is not possible on the other three cycles.

The first experiment consisted of artificially propagating 302,000 native Horsefly River Sockeyes, which will be hatched, reared, marked by fin clipping and released back into the Horsefly River. The purpose of this experiment is to determine if the fish will return to their native spawning area. The study is designed to serve as a control experiment over transplantations from one stream to another.

Expect Horsefly Run Recovery

No direct attempt will be made to build up the present Horsefly run on this cycle by artificial propagation, since it is expected to rehabilitate itself quite rapidly by natural methods. The spawning escapement this year was over 12,000 fish from a spawning in 1945 of 3000 fish.

The second experiment was designed to start the rehabilitation of Sockeyes in the Upper Adams River, Shuswap district, which at one time had a large early run. No vestige of these fish remains as the result of the Hell's Gate slide in 1913 combined with the Old Adams River splash dam, which completed extermination by preventing the few fish that did pass Hell's Gate from reaching their spawning grounds.

Seymour Seed Sent to Adams

As a start towards this, 158,000 eggs were taken from the Seymour River, a stream flowing into the Upper Shuswap Lake. The run to the Seymour River was not entirely destroyed by the Hell's Gate slide and is now increasing substantially. Over 6,000 fish spawned in this waterway during the 1949 season, and from these fish came the eggs for transplantation to the Upper Adams.

Two requirements not seriously considered in the previous transplantation of Sockeyes in the Fraser River system are now believed essential to success in establishing self-maintaining runs. They are:

Two Transplanting Essentials

1. Water temperature at spawning time should be the same in both the parent and adopted stream.

2. Distance of migration from salt water to the spawning ground must be at least approximately the same.

Sockeyes do no feed after leaving salt water and rely on their stored energies to reach their spawning grounds. If the distance is greater than that which they are inherently capable of traversing, they may survive yet not reach their spawning grounds to fulfill the required purpose.

If the water temperatures in the adopted stream are not similar to those of the parent stream, the productivity can be so lowered that even though the transplantation is successful, self-maintenance by natural propagation will be impossible. These two factors, among others, are being carefully considered in the Commission's operations.

Thorough Test of Transplanting

Where a race has been exterminated in a once-productive area, rehabilitation cannot be accomplished by regulation. A new race must be artificially established if that area is again to become productive. To meet this latter need for rehabilitation, the experimental field station was established on the Quesnel watershed to determine feasible methods for transfering races of Sockeyes to barren or potential areas. It is not a substitute for artificial propagation.

The runs, if successfully transferred, are expected to be maintained and increased by natural

Fraser River Sockeye Spawning Populations For 1949 and Cycle Years

Runs	1941	1945	1949
Early Stuart	6,300	28,200	581,000
Late Stuart	5,500	23,600	131,000
Early Fraser-Francois	500	1,300	26,600
Late Fraser-Francois	5,200	20,800	104,800
Bowron River	1,200	4,100	22,300
Chilko River	280,000	193,000	59,000
Quesnel River	1,200	3,000	12,200
Early Thompson River	300	3,500	13,300
Late Thompson River	*50	67,500	†15,000
TOTAL	300,250	345,000	965,200
Lower Fraser			
Birkenhead River	46,500	80,600	†74,000
Cultus Lake	18,200	9,200	†10,000
Pitt River	**	**	9,500
Weaver Creek	9,200	13,000	12,500
Silver Creek	2,000	2,000	2,100
Other streams not listed	68,650	22,500	.....
TOTAL FOR ALL STREAMS	444,800	472,300	1,074,100

*Run blocked at Hell's Gate. Mostly Jacks on this cycle.
**Pitt River fish are predominantly five years old. No previous spawning records on the 1949 cycle.
†Preliminary figures.

BASIL FEARN
ENGINEER & MANUFACTURERS' AGENT
BECK'S COVE
ST. JOHN'S, NFLD.
P. O. BOX 2163
TELEPHONE 6320

12 April 1949

Messrs. Cooper-Bessemer Corp.
49 Duncan Street
Gloucester, Mass., U.S.A.

Dear Mr. McEwen:

I am enclosing a few snapshots of the TERRA NOVA taken at the seal fishery this year, and from these you will get an idea of the ice conditions they have and the way the boat and engine is abused. The TERRA NOVA made a very quick trip and came in absolutely loaded with seals. On Saturday she cleared again for a second trip. I have never heard anyone so enthusiastic about the engine's performance as the captain and engineers were, and the boat and engine certainly proved themselves this trip.

Yours very truly,

BASIL FEARN

Per:

BF/fb

Another Example of Efficient Power at Lower Cost

REPORT FROM THE

Terra Nova

The Terra Nova, trim 140', 379-ton sealer and freighter, was designed by Captain Jean Berthe, superintendent of Newfoundland Shipyard, Ltd., is owned and operated by Bowring Brothers, Ltd., and is powered by highly efficient, long-lived Cooper-Bessemer JS-6, 425 hp diesel.

Fast, efficient trips to and from the sealing grounds in Labrador . . . trouble-free engine behavior despite continuously heavy overloads in battling ice . . . complete reliability in freighting service during off-season months — these are the things that make the men on the Terra Nova so enthusiastic about their Cooper-Bessemer diesel power. Why don't *you* check with Cooper-Bessemer on that next powering or repowering job?

The **Cooper-Bessemer** *Corporation*

MOUNT VERNON, OHIO — GROVE CITY, PENNA.

640 East 61st Street, Los Angeles 1, California
29 Pine Street, San Francisco 11, California
570 First Avenue, S., Seattle 4, Washington
Simson-Maxwell Limited, Vancouver, B. C.

Mayor Charles E. Thompson of Vancouver, B. C., samples some British Columbia canned salmon during the official opening of Canned Salmon Week in Canada, while executives of the industry look on. Left to right —J. Macdonald, secretary, Salmon Canners Operating Committee; Richie Nelson, president, Nelson Brothers Fisheries, Ltd.; J. S. Eckman, president, The Canadian Fishing Co.; John M. Buchanan, president, B. C. Packers, Ltd.; Richard Bell-Irving, president, Anglo-B. C. Packing Co.; S. M. Rosenberg, general manager, The Canadian Fishing Co., and chairman, Salmon Canners Operating Committee.

propagation and not by artificial aids. The commission does not guarantee success in this operation, but believes it is mandatory that attempt be made by the most careful scientific procedures to re-establish runs in most once-great producing areas where no vestige of a run now remains.

New Runs Must Be Economic

A further obstacle in the path of success is that, even though a nucleus of a run is started in the adopted area, it must be of a character sufficiently suited to its fresh water environment to allow for an increasing population in spite of a commercial fishery. A race transferred but not capable of a competitive rate of reproduction would be of little value to the economy of the Fraser River fishery.

It is only by extreme care in following every scientific precaution in introducing the stock to the adopted area that any hope of success can prevail, according to the Commission's biologists. Failure by the use of any one method will not discourage the Commission from continuing its work in this connection.

The capacity of the Quesnel station on the Horsefly is 2,000,000 eggs and 1,500,000 fingerlings.

A good many people in the marine industries of the Pacific Coast will find real interest in news of the appointment of *C. A. RAABE* as chairman of the National Yacht Club Heart Campaign, on behalf of the American Heart Association's drive for funds for its research program. Mr. Raabe is president of the C. A. Woolsey Paint & Color Co., whose marine bottom paints have been used extensively on Pacific fishing vessels for many years.

1949 Sockeye Regulations To Be Set January 28

Decision on the Fraser River Sockeye fishing regulations for 1949 is expected to be made at a meeting of the International Pacific Salmon Fisheries Commission to be held in Vancouver January 28, 1950.

This was decided at the December meeting, held in Bellingham, at which the commission conferred at length with its conference board, and heard reports of its biologists and administrators.

The commission elected Senator Tom Reid of British Columbia chairman, with Alvin Anderson, Washington director of fisheries, as secretary.

"Silverteak's" Fish Meal Cargo Report Erroneous

It was erroneously reported on Page 59, November, 1949, issue of PACIFIC FISHERMAN that the ship *Silverteak* had discharged 15,000 tons of fish meal at San Francisco.

The amount actually brought in by *Silverteak* in that shipment was 400 tons. This meal was shipped at a time when no other supplies were available, and according to fish meal market observers could not possibly have had any demoralizing effect on the fish meal market, as was reported in PACIFIC FISHERMAN.

Hydraulic-Driven Winch

The 57′ combination salmon seiner and halibut boat *Lorraine*, owned by Larry Broad of Wrangell, Alaska, was recently equipped with a Hydra-Hoist anchor winch purchased from the Jules Engine & Equipment Co., Seattle.

"Divided" Halibut Season Better Than "Split" One

Indications that Canadian opinion is swinging toward the desirability of a "divided" halibut season in Area 2 rather than a "split" season were reported by R. M. Winslow and Neville Gerard of the British Columbia Packers, Ltd., who visited Seattle early in December to discuss matters with the trade and the International Fisheries Commission.

Mr. Winslow said that there was a good deal of opinion solidifying in Canada behind a proposal to supplement an Area 2 quota and season similar to that of 1949 with a later one-trip season perhaps in September. This late season would be designed to permit utilization of stocks not worked at the present time, and to such extent as the commission might feel was justified by condition of the late stocks.

During the hearings held last fall the commission indicated that it felt a substantially larger catch could safely be taken from Area 2, providing the period of active fishing was extended over a greater portion of the year.

SCAP'S Fisheries Chief Addressed Seattle I. P. R.

W. C. Herrington, fisheries of SCAP'S Natural Resources Sections, was in Seattle for a few days in December en route back to Tokyo.

His only public utterance was at a luncheon meeting of the Institute of Pacific Relations at the Rainier Club Dec. 12, with Edward W. Allen presiding.

An example of how scores of tuna clippers crowd into San Diego yards for the winter overhaul and replacement period, is shown here in a photo taken in December from a tuna clipper on Martinolich Shipbuilding ways, and looking east. Vessels shown here are in the yards of National Steel & Shipbuilding Corporation and Lynch Yard, the latter now operated by NS&S. Had the camera been turned the other way, equally crowded docks and ways would have shown San Diego Marine Construction Company and Campbell Machine Co. Another busy yard was the Harbor Boat & Yacht Company, located near the Point Loma district of San Diego harbor.

Alloys, Rubber and Chemicals Protect Tunamen Against Ravages of Tropics

The annual winter overhaul of Southern California fishing fleets was rapidly being completed as owners and crews readied their vessels for long voyages in 1950. The replacement, overhaul and modernization work in yards of San Diego and Los Angeles harbors was not so intense this winter as previously because of staggered fishing schedules in force for early-year departures of the tuna fleets.

A major job was undertaken by Harbor Boat Building Company, Terminal Island, for Joe Soares, San Diego, who had purchased the 124′ clipper, *Madierense* and repowered her with an 825-hp., 8-cyl., supercharged Enterprise diesel. The machinery was completely overhauled and reconditioned, and a new Baker condenser for the refrigeration system installed. Radar was also installed.

Among the many jobs this year was the installation in Tony Truttanich's seiner *Star of San Pedro* of a new 450-hp. Enterprise diesel, direct reversing, and fresh-water cooled. Also at this yard a new 5⅛″ by 18′ Monel tail shaft with two Monel sleeves, was put in the seiner *Sea Scout*. A Goodrich Cutless bearing, 6″ was installed.

New Clipper Nearly Done

At San Diego Marine Construction Company, the final details are being completed on this pioneer yard's finest wood tuna clipper, 110′ *Vera M*. The new clipper, to undertake her maiden cruise in early 1950, has General Motors propulsion and auxiliary power, Baker refrigeration, Westinghouse motors, 46 in all; Campbell bait pumps, "Fathometer," and Sperry magnetic compass and electric steering engine.

Using the San Diego Marine's great floating dock were a number of major clippers, including the *Mary E. Petrich, Sun Hilarita, White Star,* etc. Being reconditioned after being sunk and refloated at southern tuna banks was the clipper *Joyce*.

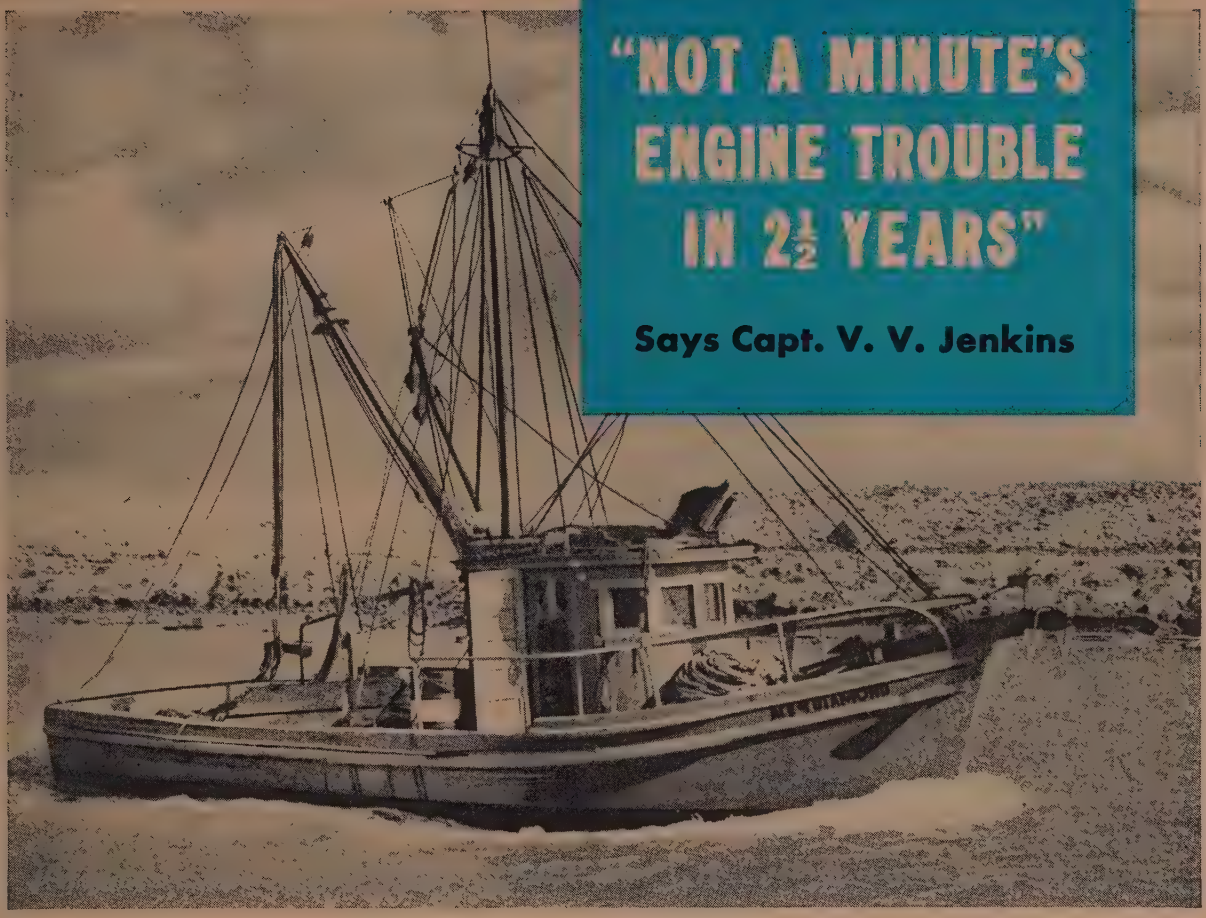
Campbell Machine Company, San Diego, always a busy yard at the end of the year, was crowded with clippers in December and early January. Next year the yard will be able to haul out twice the present number, with the installation of two 1,000-ton and one 400-ton floating dry docks.

White Star was in for building a new top on pilothouse and putting the crow's nest on a steel tripod. *Zarco,* formerly the *Galapagos,* was in for installation of two General Motors 75-watt diesel generating sets. *American Boy* received a 7⅝″ by 18′ monel tail shaft, with Goodrich Cutless bearing. *City of San Diego* had her brine system modernized. *Marlin VIII* was being rebuilt after a serious fire. At this yard probably two-score clippers were bottom and topside painted, many of them with Atlas paints.

National Steel & Shipbuilding Corporation yard was crowded with clippers. *Patria* was given a new

"NOT A MINUTE'S ENGINE TROUBLE IN 2½ YEARS"

Says Capt. V. V. Jenkins



Powered by a 4-cylinder GM Series 71 Marine Diesel turning a 29" x 22" propeller through 2.05 reduction gear, the "Ace of Diamond" was one of the top five boats operating out of Port Isabel, Texas, in total fish tonnage in 1948. She is equipped with supersonic depth recorder and 2-way radio.

BEFORE she was converted from gasoline to GM Diesel power, the 42-ft. shrimper "Ace of Diamond" towed a 75-ft. net. Now she pulls an 85-ft. net—and does it at a 50% saving in fuel cost.

Capt. "Red" Jenkins says, "The engine hasn't given a minute's trouble since it was installed. It has already paid for itself in increased production. I wouldn't be without that instant electric starting."

That's the kind of comment you'll hear from fishermen everywhere, because GM Diesels not only provide plenty of low-cost, dependable power, but save valuable space for pay load.

Boatmen in every type of operation are turning to these 2-cycle Diesels in ever-increasing numbers. If you are planning to build or repower, ask our distributor to show you the money-saving advantages GM Marine Diesels offer, or write us for details.

DETROIT DIESEL ENGINE DIVISION

SINGLE ENGINES...*Up to 200 H.P.* **DETROIT 28, MICHIGAN** MULTIPLE UNITS...*Up to 800 H.P.*

GENERAL MOTORS

DIESEL DRAWN WITHOUT THE BULK

GM GENERAL MOTORS DIESEL POWER

Evans Engine & Equipment Co., Inc.
SEATTLE 9, WASHINGTON

Fred M. Viles & Company, Inc.
SPOKANE 8, WASHINGTON

Crofton Diesel Engine Co., Inc.
SAN PEDRO, CALIFORNIA

Gunderson Bros. Equipment Corp.
PORTLAND 9, OREGON

West Coast Engine & Equipment Co.
BERKELEY, CALIFORNIA

Everyone's talking about.....

this revolutionary new NYLON FISH NETTING

MAGAZINES ALL OVER THE COUNTRY are telling their readers about the wonders of NYLOCK*, the 100% Nylon Fish Netting. It's the biggest news in the fishing industry! For NYLOCK Fish Netting *increases your catch – lowers your operating costs.*

HERE'S HOW:

NYLOCK Netting requires no drying, no preservatives. It wears longer, retaining an amazingly high degree of tensile strength when wet. It is not affected by mildew, marine organisms, salt water, oil, gasoline. NYLOCK is specially treated for sunlight resistance. It absorbs only 6% of its weight in water compared with cotton's and linen's 100% absorption.

For further information, write, wire or phone one of the following manufacturers who use NYLOCK Nylon exclusively for all their Nylon fish netting:

R. J. EDERER and subsidiaries – 540 Orleans St., Chicago, Ill.
Unity and Elizabeth Sts., Philadelphia, Pa.

THE FISH NET & TWINE CO. – 310-312 Bergen Avenue, Jersey City, N. J.

MOODUS NET & TWINE INC.—Moodus, Connecticut

A. M. STARR NET CO.—East Hampton, Connecticut

NYLOCK* 100% Nylon Fish Netting

*Trade Mark

SOLE DISTRIBUTORS:
BROWNELL & COMPANY, *Inc.*
—also manufacturers of
Nylon Maitre Cord and Hanging Twine
Moodus, Connecticut

MANUFACTURED BY:
The **HEMINWAY & BARTLETT** *Mfg. Co.*
Watertown, Connecticut

One of the tables at the Pacific Fisheries Conference luncheon, Los Angeles, Nov. 18. Left to right: James Waugh, Fishermen and Cannery Workers Union; Milton Brooding, California Sardine Products Institute and chairman of the P.F.F. executive committee; Edward W. Allen, vice chairman of the conference; Harold Grotle, Deep Sea Fishermen's Union of the Pacific; Dr. Richard Van Cleve, University of Washington; Dr. W. M. Chapman, Department of State; Donald Loker, California Fish Canners Association; Charles Cary, National Canners Association; John V. Morris, president, California Fish Canners Association.

streamlined pilothouse; *Katie Lou* was sandblasted; rigging was renewed on *Mary Barbara. Lucky Star* was sandblasted and metal sprayed. *Coronado* was bottom-painted with Navicote "Fishermen's Plastic." *Margie Pearl,* which had gone temporarily aground on her last southern trip, needed keel and shoe replacement and while hauled-out, a new Goodrich Cutless bearing was installed.

New pumps were installed in the *St. George;* anti-skid covering was used on decks of several clippers; *Lou Jean* received a new Goodrich pintle bearing on rudder, a new fish chute, and was hull-painted with Americoat, supplied by Nuttall-Styris. *Anna M.'s* wooden hull was burned down to skin and given two coats of copper paint. A new Ingle oil-burning range, complete with stainless steel accessories was installed by Carlson-Collins in the galley. *Joan of Arc* got a Goodrich rubber pintle bearing on her rudder.

Normandie, largest clipper, was in for extensive repairs and overhaul; *Mary Lou* had ammonia coils in wells and fish racks galvanized; *Conte Bianco* was given new coils in wells; *South Coast* got a Goodrich Cutless bearing and a new bait receiver to take south with her; *Sun Jason* was sandblasted, metal sprayed and decks covered with anti-skid.

Martinolich Shipbuilding Company had developed a new sand-washing machine which reduced time of cleaning down steel and wood hulls to one-day's time. *Paramount, Sun Ray, Sun Maid* and *American Clipper* were among many so treated. American Marine hot and cold plastic paints were used, and in this yard and many others hundreds of gallons of American Marine Triple C copper compound paint was used.

Hull Sand-Washing Developed

At Martinolich the *St. Matthew* was given new 5" Goodrich bearings for tail shaft, inboard and outboard, among other repairs and replacement; *Lusitania* was equipped with a new bronze tail shaft with Monel liners; *Hornet* and *American Belle* got new oak rudders; bait wells on *Sun Voyager* were recoiled, and wells sand-blasted and metal sprayed. *Paramount* got a stainless steel galley sink.

St. Francis was given refrigeration work and Shepherd Diesel Marine supplied a DR-9, 200′ Bendix Bantam Depth Recorder for installation in the clipper's tuna tender.

Shepherd also installed a Bendix DR-7, 100 fathoms Depth Recorder on the Kettenburg-38 Albacore boat, *South Wind.* Freeman Metal Pilots were put in the clippers, *Patria* and *Sun Splendor* by Shepherd's San Diego branch.

Monel Sleeves Installed

At Al Larson Boat Shop, Terminal Island, a new wood purse seiner was under construction. Dimensions are, length, 55′, beam, 16′, depth 8′. Main engine is a 120-hp. Atlas Imperial diesel. Many seiners were in this yard preparing for the coming tuna-netting season. The *City of Stockton* was in for installation of a new bronze tail shaft with Monel sleeves. Adolph Larson reported he is installing Monel sleeves for tail shafts in fishing vessels. In this yard, 90% of bottom and topside paint used is Atlas.

Long Beach Marine Repair Company launched the new 100′ tuna clipper, *Marilyn Rose,* for Capt. Anthony Brown and associates on December 17. The vessel has as propulsion an 8 cyl. 500-hp. Fairbanks Morse diesel. Auxiliaries are two General Motors 671 diesels connected to 60-kw. generating sets.

In mid December the yard had in for various services and repairs the clippers, *Miss America, Renown, Columbia, Southern Cross, Cal-Sea* and *White Star,* as well as a number of purse seiners.

An item of importance during the winter overhaul was marine bottom and topside paints. It was estimated at San Diego alone, the 150 or so tuna clippers in the various yards during the period required no less than 2,000 gals. of paint, for hulls, wells, interiors, etc.

Harbor Boat & Yacht Company was one of San Diego's busiest yards during the overhaul period. Arne Strom, the yard general manager, estimated around 30 to 40 clippers came in during December for various services and painting. The veteran clipper, *Alert,* underwent a modernization program and installation of a Carrier Freon compressor driven by a 20-hp. Fairbanks Morse motor. The *Jenita* was in for painting with Atlas Gold Label copper paint, and installation of an outboard Goodrich Bearing on the tail shaft.

West Point was in for engine overhaul; *St. Mary* for metal spraying of cargo wells, and new stainless steel sink in galley. *Morning Star* got a new bait tank; *North Star* received a new 3-hp. General Electric motor for running a brine transfer pump.

Capt. John Sellereit of the *Pacific Pride* purchased a Nordberg engine from the Cliffe Mathers Company to power his skiff.

NEW RPM DELO OILS
cut engine wear-rate up to 85%

New RPM DELO Lubricating Oils contain advanced, special compounding. Proved in actual operation, they keep engines cleaner, increase protection and extend overhaul periods of all heavy-duty engines.

Cut liner wear rate up to 85%. In service under extreme operation conditions, these new RPM DELO Oils reduced wear-rates up to 85% over conventional heavy-duty type lubricants.

Reduced engine deposits as much as 75%. Superior compounding in new RPM DELO Oils kept top-ring grooves, oil rings, and skirt areas of pistons remarkably clean in high-temperature, high-output truck and tractor engines.

Saved 40% to 60% on maintenance. Records show that new RPM DELO Oils cut maintenance costs as much as 60%, reduced oil consumption 30% to 50% over the long run.

Proved in full range of engine service. This new line covers normal to extremely severe conditions. The grade that meets your needs will double protection against lubrication failures, give you all-around better engine performance.

RPM DELO Heavy Duty Lubricating Oil
A new, high quality-level compounded oil recommended for heavy-duty diesel or gasoline engines in normal to difficult service. (Meets U. S. Army Specification 2-104B.)

RPM DELO Special Lubricating Oil
Companion product to RPM DELO Heavy Duty Lubricating Oil. Has higher viscosity index for special operating conditions. (Also meets U. S. Army Specification 2-104B.)

RPM DELO Supercharged—1 Lubricating Oil
An entirely new product of higher quality-level than the products above. Fortified with new, more powerful compounding. Recommended for severe and abnormal engine service. (Meets U. S. Army Specification 2-104B, Supplemental List No. 1.)

RPM DELO Supercharged—2 Lubricating Oil
Highest quality-level oil, designed for extremely severe operating conditions. (Meets U. S. Army Specification 2-104B, Supplemental List No. 2, also the rigid requirements of Caterpillar Tractor Company's Superior Lubricants—Series 2.)

Send for the full report on new RPM DELO Oils. For complete information, call your local Standard Representative or write to Standard Oil Company of California, 225 Bush St., San Francisco 20, California, today.

Standard Oil Company of California

RPM DELO LUBRICATING OILS

New and more Efficient Compounding keeps engines cleaner, increases protection, extends overhaul period

Westgate and Sun Harbor Merge

Formation of a new company from two prominent San Diego tuna-packing concerns, Westgate Sea Products Company and Sun Harbor Packing Company, into Westgate-Sun Harbor Company is considered the most important merger since the tuna industry was reorganized in the early '20s.

The announcement was made

JACK CRIVELLO
Executive vice president of the Westgate-Sun Harbor Co., San Diego tuna firm in which are merged Sun Harbor Packing Co. and Westgate Sea Products Co.

jointly on December 5 by W. Wade Ambrose, president of Westgate, and Jack Crivello, president of Sun Harbor. Merger of the two large packing firms unites executive personnel from each of the canneries.

Mr. Ambrose became president of the new company, with Mr. Crivello executive vice president, but with both having equal administrative authority. Vice President K. J. Berglund of Sun Harbor became vice president for finances; James B. Lane, Westgate vice president, vice president for sales.

Other officers are: Carl Edwards, secretary; E. W. Sindelar, treasurer; Marvin Loughbom, sales manager for Sun Harbor Company, a separate sales division; Andrew Sanfilippo, production manager; Harold Requa, Jr., advertising and public relations director. An executive committee is composed of the new president, executive vice president and two vice presidents. Board of directors consist of the committeemen; Louis J. Rice, Jr., Raymond M. Wansley and Fred Kunzel.

To Use Sun Harbor Plant

Production will center in the present Sun Harbor plant where plans for expansion and executive offices were already drafted in December. The consolidation assured retention of the Westgate interests in the San Diego area. Termination of tideland leases held by Westgate at the foot of Juniper St. posed the possibility of this pioneer concern being forced to seek a packing location elsewhere.

In a joint statement, the two cannery heads said, "The formation of the new company will have a stabilizing influence on the tuna industry. It combines a company which has enjoyed the largest growth of any tuna firm in the past 10 years and one which has a well established brand name noted for its quality."

To Feature "Breast O'Chicken" Brand

The new company intends to exploit Westgate's famous "Breast O' Chicken" tuna on a truly national basis. Since 1926 the brand has been gradually built up by extensive advertising campaigns until, when the merger came, it was being sold in 21 of the country's major marketing areas. Now, both executives told PACIFIC FISHERMAN it is the plan to make "Breast O' Chicken" known in every sales area in the country.

Both canneries have long histories of development. Westgate's roots were in the Arrow Packing Company in 1918. Wiley V. Ambrose, father of Wade, bought out this plant in 1921 and renamed it Westgate Sea Products Company. Wade was 26 when his father's untimely death in 1939 placed him as the company president. He gradually built up the firm's contract fleet until, when the cannery processed the *Endeavor's* fare on November 24 and the plant closed down, the fleet was composed of 17 large clippers.

Sun Harbor's beginning was the Normandy Sea Food Co. in 1917; later combined with the Wheeler-Chase and known as Sun Harbor Packing Corporation. A. J. Cohn, with Roscoe Hopkins then took over and changed the name to Cohn-Hopkins, Inc.

Jack Crivello entered this firm as assistant to the production superintendent in 1933, after he quit the sea as skipper of his family's clipper, *Europa*—later to be lost in a typhoon at Okinawa after the war. In 1936, with J. C. Wood as president, and Jack Crivello, vice president, the cannery again became Sun Harbor

W. WADE AMBROSE
President, Westgate-Sun Harbor Co., new tuna packing consolidation.

Packing Corporation. Then, in 1939 the Crivello family bought out the Wood interest and the firm became Sun Harbor Packing Company.

Since that time Sun Harbor, under Jack Crivello and his executive personnel has attained a position as the second largest packer of tuna in California and, when the consolidation was made, had 31 major clippers delivering as well as numerous smaller local fishing vessels.

Even with the addition of the Westgate clipper fleet, the present Sun Harbor plant will not need much present expansion to cope with increased raw tonnage as, in the past few years it has been continually expanded and kept ahead of growing annual tonnage.

VEEDOL MOTOR OIL

Famed for the Film of Protection

Winter Weight for Winter Wear

Cold weather makes it tough on automoble engines. So you have to use a motor oil that more than matches winter's toughness. Low pour-point Veedol 10W and 20W provides the answer. Veedol is also available in SAE Grades from 10 to 70. Faster cold weather starting, quicker warm-up and real protection for bearings, pistons and cylinder walls make Veedol an all time *must.*

Veedol is made from 100% pure Pennsylvania base stocks and is additive treated for extra premium quality. To give your engine longer life, smoother running, full protection all the way, use Veedol Motor Oil.

Call your Associated Representative for expert help on any lubrication problem

TIDE WATER ASSOCIATED OIL COMPANY

Alaskan Albacore Explorers Pin-Point Positions of Tuna Schools With Loran

Exploratory fishing vessel *Oregon* as equipped for Albacore investigations in Alaskan waters.

Long range navigation—provided by a loran installation—proved of very practical application in the fall Albacore exploratory voyage of the Fish and Wildlife Service vessel *Oregon*.

The Sperry loran equipment made it possible for the vessel to obtain an almost instant "fix" on every appearance of Albacore, and to report the presence of fish immediately to the fishing vessels in the vicinity.

In actual operation the fishermen found some difficulty in finding the spot where the fish had been located, due to the nature of their navigational equipment.

Oregon was commanded on her voyage by Capt. Sheldon Johnson, who is due to take command of the Alaska exploratory vessel *John N. Cobb* when it is complete. This vessel, building by Western Boat Building Co., will be equipped with loran, as well as Sperry radar, magnetic compass pilot, electro - mechanical steering, and searchlight.

Capt. H. E. Crowther, chief of F. A. W. S. exploratory fishing section, with a large Albacore taken in the course of the *Oregon* expedition.

Fishing Value of Loran Evident

When the *Oregon* was in port during her cruise in Alaskan waters a number of fishermen visited the craft and Captain Johnson found them eager to see the loran demonstrated, as it appeared to possess valuable possibilities in the way of increasing the effectiveness of fishing operations, as well as of navigation.

Donald E. Powell, fishery engineer aboard *Oregon,* reported that en route north toward Alaska, several schools of tuna were sighted off Cape Cook and Cape Scott, but the fish were moving too fast and could not be approached for effective chumming with the live pilchard. Water temperatures were favorable, and feed appeared to be abundant in spots; but fish were not striking the trolling gear.

From Cape Chacon *Oregon* ran 300 miles off-shore. Water of 58° was reached in the vicinity of the Dickins Seamount, which is approximately 150 miles offshore; but no tuna were seen until the Welker Seamount was reached. Several large Albacore were caught trolling in the afternoon in 57.5° water. It appeared these were scattered fish, as they were all caught singly, and no school could be found.

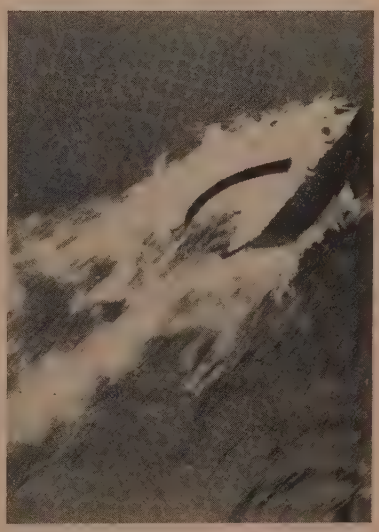
Fishing as far north as Sitka, *Oregon* found water temperatures were generally cold, and no fish were seen or caught until the Dickins Seamount was again reached. Scattered fish were caught off Dixon Entrance and the northern Queen Charlotte Islands but no large schools were encountered.

Albacore Averaged 14.25 Lbs.

Length and weight measurements were made on 185 Albacore caught in the area extending from Grays Harbor, Washington, to Sitka, Alaska, and up to 300 miles offshore. Fish ranged from 23.5" to 34.5", with an average length of 27.5". Weights ranged from 8.5 lbs. to 30 lbs. and averaged 14.25 lbs. The tuna taken were all immature fish. None examined showed the slightest approach toward a spawning condition.

Surface temperatures recorded at hourly intervals or less ranged from 49° F. to 61.5° F., the warm water of the Japanese current being encountered at varying distances offshore up to 100 miles or more de-

A jig-caught Albacore on the surface, just before being hauled aboard the *Oregon*.



pending on the latitude, time of year, and geographical features of the coastline. Tuna were caught in water from 56.8° to 61° F., the best fishing being found between 58° and 61°. Surface currents varied from day to day.

All Fish Taken on Jigs

All fish were caught on trolled jigs of various sizes, colors and construction purchased fully made-up on the commercial market or assembled by the fishermen on the ship. Two lines were trolled from each pole and two or three from the stern of the boat. The lines varied from 15 to 25 fathoms in length, and were usually fished without weights. Subsurface jigs pulled at various depths on several occasions failed to catch fish, but it is felt that further work with the weighted lines might prove successful under certain conditions. Preference for certain lures was found to vary from time to time; amber-head jigs, white bone jigs, pearl-eyed jigs, and green-head jigs with red and white feathers all catching most fish in certain areas. When schools of Albacore were encountered, all jigs took fish.

Examination of the stomach contents of a representative number of fish caught revealed that no single item of food is dominant in the diet of the Albacore over the entire area studied. Small rockfish were one of the commonest foods noted. In the area of good fishing about 50 miles southwest of Cape Flattery, tuna caught were found to be feeding almost exclusively on small rockfish. Stomachs of specimens taken along the Queen Charlotte Islands also contained rockfish, but none were found in fish taken over the Dickins and Welker Seamounts in Alaskan waters.

"Redfeed" also was abundant in the stomachs of tuna taken in Canadian and Alaskan waters. Saury were found in fish caught from the Washington coast to the Welker Seamount, providing almost the entire stomach contents at the latter place. Small squid, octopus, larval fish, and unidentifiable fish remains were included with the other food. Many fish examined had empty stomachs.

Fish Not in Tight Schools

No opportunity was found to use the live bait for effective chumming or pole-and-line fishing. Unlike the Albacore in southern waters which travel in large schools on the surface and are readily found by the presence of feed and birds, tuna in this area appeared to be scattered, traveling singly or in small schools. With very few exceptions, no surface sign was noticed before or during the time fish were caught. Catches in commercial quantities were made as far north as the upper end of Graham Island, but only scattered fish were found in Alaskan waters during the present survey.

Hovden Adds Line

The Hovden Food Products Corporation at Moss Landing has been equipped with a new American Can Co. closing machine for the 5-oz. round can line for sardines.

Sardine Holding Tank

Frank Richey, Port Costa Packing Co., Moss Landing, Calif., has installed a new 30-ton fish holding tank in the plant.

Mel Marsh, left, president and general manager of South Pacific Canning Co., Long Beach, greets Manuel A. Fernandes, captain of the new Avondale clipper Sea Magic after his return from the vessel's maiden fishing trip of some 90 days. South Pacific Canning Co., for whom *Sea Magic* fishes, is the packer of such labels as Blue Shore, Old South, Palomar, Royal Pacific, Sea Gold, South Pacific.

Hovden Albacore Pack Notable in North Calif.

Hovden Food Products Co., Monterey, emerged as one of Northern California's largest packers of Albacore during the 1948 season, according to W. O. Lunde, secretary-treasurer of the company.

Albacore was packed under Portola, Prefet, and Cresta Blanca brands, and fish were received from Eureka, Ft. Bragg, San Francisco, Santa Cruz, Monterey and Moss Landing. The Hovden plant in Monterey has large freezing and holding capacity, and Albacore was packed steadily for eight hours daily for three months, excepting Sundays and holidays.

Conference Work Impressive

Echoes from the Coronado salmon convention and the Pacific Fisheries Conference at Los Angeles received attention at the Northwest Association's November-December meetings; President M. G. Brown, on returning from the south, declared that the Conference was remarkably well conducted, marked by sincere hard work for the protection of all Pacific fishery interests by all participants, and well worth attending by any operators who can do so.

At this time, also, considerable attention was given to current and prospective labor problems of the salmon industry. The Association decided to hold no meeting from Dec. 7 to Jan. 11.

Mackerel Pack Nudges 900,000 Cases for '49

Canneries in the Los Angeles-Long Beach district and Newport Harbor needed less than 50,000 cases packed in December to attain a total of 900,000 cases for 1949, which would be a few thousand cases ahead of the previous year.

November produced 101,928 cases from 4,555 tons delivered by both seiners and scoopers. Biggest month of the year, which saw no cessation of deliveries for the entire 12 months, was October with 13,251 tons brailed, and 271,605 cases packed.

The season opened with $60 per ton paid for Pacific; $50 for Jack. However, as the sardine season opened, the raw price dropped materially until, in December $40-35, Pacific and Jack was paid, with Newport scoopers receiving as low as $25 per ton.

Demand for canned mackerel in the domestic market was brisk throughout the year, but there was a general weakening in canned prices. By December 15, the average quotation was $5.75, Jack; $6.25, Pacific, 1-lb. Talls. There was very little activity in the foreign market.

Such mackerel as packers held in late December was in very firm hands, and it was expected there would be a price raise in the early new year of probably 75c per case, both grades.

Stanley B. Butler re-powered with a NORDBERG DIESEL

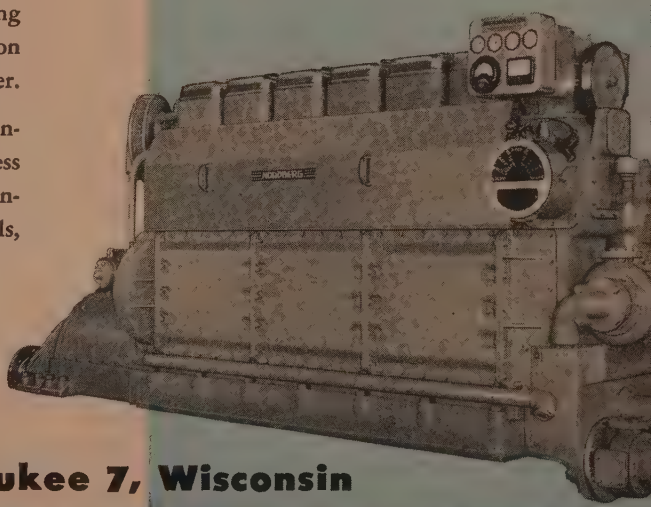
...and here are the results

- **SAVED** over 4,000 lbs. in weigh
- **SAVED** 3 feet in length
- **GAINED** 2.5 to 3 knots in spe
- **SAVING** 3 to 4 gallons of Diesel fuel per hour

THE 94 ft. dragger *STANLEY B. BUTLER*, owned by Capt. Olaf Anderson, has long been associated with the fishing industry around New Bedford, Mass. Helping to give this sturdy hull new vitality is her Nordberg Diesel main propulsion engine, installed some months ago in a repowering operation. The Nordberg Diesel chosen by Captain Anderson is a 6-cylinder, 9" x 11½" supercharged 4-cycle direct-reversing unit. Developing 480 hp at 720 rpm, and equipped with a 2:1 reduction gear, this dependable Diesel swings a 64"x48" propeller.

When considering a repowering job or a new installation, get the advantages of more power in less space — less weight — more speed — better fuel economy by installing a Nordberg Diesel. Write for details, outlining your requirements.

NORDBERG 4-CYCLE MARINE DIESELS for fishing craft are built in sizes from 220 to 1750 H. P.— supercharged and non-supercharged for direct or reduction gear drive. Two-cycle models built in sizes up to 8500 H. P.



NORDBERG MFG. CO., Milwaukee 7, Wisconsin

A DIVISION OF NORDBERG

NORDBERG

DIESEL ENGINES

Chrysler

AMERICA'S No. 1 MARINE ENGINE

Proudly Announces Greater Power Range

87 hp. ACE

104 hp. CROWN

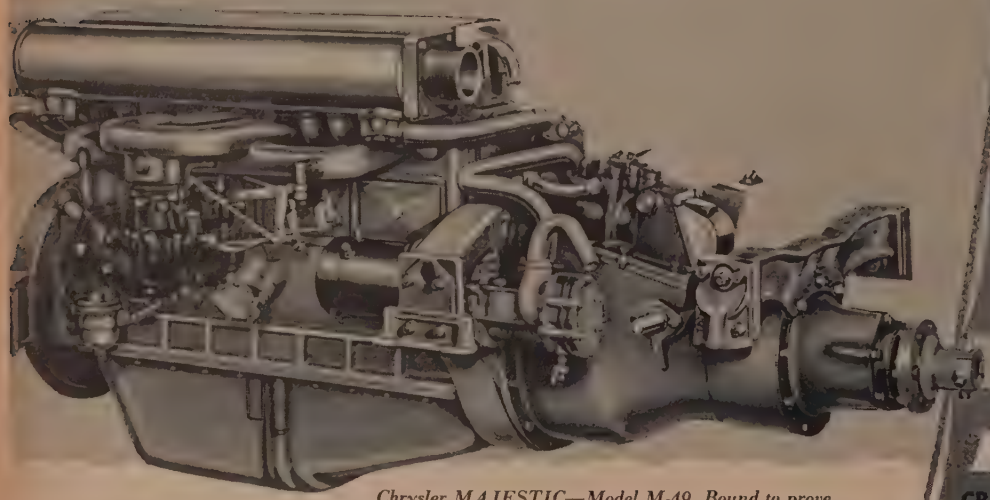
135 hp. ROYAL

160 hp. MAJESTIC

105 hp. ACE SPECIAL

125 hp. CROWN SPECIAL

165 hp. ROYAL SPECIAL



Chrysler MAJESTIC—Model M-49. Bound to prove popular both with pleasure and work boat owners. Bore and stroke 4" x 5". 377 cu. in. 160 H.P. at 3000 r.p.m.

For 1950, choose your marine engine from the largest and finest line ever offered under the Chrysler name.

Every one of the seven models is completely Chrysler-designed, Chrysler-engineered and Chrysler-built solely for marine use. Chrysler does not convert, rebore or rebuild marine engines.

A host of new improvements in addition to the Chrysler low cost Hydraulic Control are featured. Prices are quoted on complete engine units. No extra charge for Storage Battery, Full Flow Oil Filter, Oil Cooler, Thermostatic Control, Rubber Mountings or Opposite Rotation Engines.

If you are planning to power or repower this year, you'll find by every comparison *your best buy is Chrysler!*

Chrysler

MARINE ENGINES

MM—

Mail this coupon for details!

MARINE ENGINE DIVISION, CHRYSLER CORPORATION
12200 EAST JEFFERSON AVENUE, DETROIT, MICHIGAN

Send me descriptive folder on your 1950 line.

Name_____

Street_____

City_____ State_____

Atlantic City Conventions Attract Salmon Sellers

Most of the Pacific canned salmon sales organizations, and some of the production departments, will be represented at the National Canners Association and National Food Brokers' conventions at Atlantic City, N. J., the week of Jan. 22-28. Some of the conventioneers plan to return direct; others will spend a month or more calling on their trade connections. Representation of the various concerns, as far as could be learned at presstime, will be as follows:

Anderson & Miskin, Ltd.—Alex H. Gibson, vice-president.

H. G. Bauer Co.—Harold G. Bauer, to spend all of January among the principal Atlantic seaboard markets.

Columbia River Packers Association, Inc.—Tom Sandoz, executive vice-pres.; Fred S. Sandoz, sales manager; John S. McGowan and H. Wm. Larson, at the Shelbourne, room 400; possibly also Nick Bez, chairman of the board, and Edward W. Thompson, president.

Deming & Gould Co. and *Pacific American Fisheries, Inc.*—Howard L. Scott, pres. Deming & Gould, with G. R. Squires and A. P. Rickert, at Haddon Hall; numerous calls on brokers and distributors, both going and returning.

Dehn & Co., Inc.—Karl and Alan Dehn, at Haddon Hall; to make some calls afterward.

Gavin Bros., Inc.—Jay and Neill Gavin, at Haddon Hall; to visit trade in a number of markets before returning.

G. P. Halferty & Co—Guy Halferty, Sr., with H. H. Horchover, Marnie Brown and Fred Kolash, at the Ambassador; Marnie and Fred to do same traveling afterward.

Hamlin-Halferty Seafoods, Inc. (successor to E. H. Hamlin Co.)—G. P. Halferty, Jr., to make a number of visits en route going and returning.

P. E. Harris & Co.—E. M. Brennan, vice-president, and newly-elected president of Association of Pacific Fisheries, with E. O. Paup, sales manager; Miss Montan as secretary, and possibly John X. Johnson of the Harris organization.

George A. Jensen & Co.—Geo. A. and Geo. W. Jensen, at the Marlborough-Blenheim; Geo. A. to cover the principal eastern markets afterward.

Junge-McGregor Co. — R. D. Junge, with H. M. Shipley, Spokane manager.

Kelley-Clarke Co. — Walter H. Tuesley, manager salmon department, and Walter C. Meredith, assistant manager; will probably spend some time visiting markets.

McGovern & McGovern—E. B. McGovern, L. A. Petersen and Arthur McGovern, at 1009 Haddon Hall. E. B. will start early and make stops at the Twin Cities, Chicago, Cleveland, Buffalo and New York, and later make a trip through the "deep south"; Mr. Petersen to cover the New England states, and Arthur McGovern the Southwest, after the convention.

New England Fish Co.— R. Starr Farish, sales manager, and Bill Gilbert, field representative; to spend some time afterward calling on the trade.

North Pacific Seafoods—Robert S. Ennis, Jr., sales manager, at the Shelbourne; to cover all eastern markets from early January to mid-March.

Oceanic Sales Co.— J. E. Salmon, F. Leo White and James Stephens; to do some post-convention traveling, but plans not fully developed.

Red Salmon Co. and its sales branch, *Frank B. Peterson Co.*, and *Wards Cove Packing Co.*—A. W. Brindle and possibly Harold Brindle, proprietors, and Emery Stanley of the sales department.

Reno-Johnson-Sjoblom, Inc.— K. V. Sjoblom and possibly F. H. Johnson; to leave about the first of the year and visit all their field brokers during January and February.

S & P Sales Co.— Phil Carmichael, at the Shelbourne.

San Juan Fishing & Packing Co.— Lawrence Calvert, president, and possibly William Calvert, at the Ritz-Carlton.

Walter P. Shiel & Co.—Walter P. Shiel, at Ritz-Carlton with the Calverts, for whose canned fish line he is sales agent; to remain east through February and visit many markets.

Skinner & Eddy Corp., Inc.—H. A. "Dixie" Fleager and Jack O. Daly; Mr. Fleager to spend three weeks in New York, then visit Boston, Chicago and San Francisco before returning; Mr. Daly to visit a number of other markets.

Ivar Wendt—Ivar Wendt and Bob Balle, at the Ritz-Carlton; Mr. Balle to start early and make a number of calls before and after the convention.

Whitney & Co. and *Carl Rubinstein Co.*—E. Guy Wilson, at the Ritz-Carlton; and Sam Rubinstein may drop in on his way to Europe.

Skinner & Eddy Recommend Reading *Pacific Fisherman*

Skinner & Eddy Corp., Inc., Seattle, in a recent bulletin to their brokerage representatives throughout the country, say:

"We recommend that you subscribe to the PACIFIC FISHERMAN—a monthly publication dealing with Salmon, Tuna, Sardines, Crabmeat, etc."

"As a result of more than 30 years' experience with food brokers and salesmen," the circular says, "We are firmly of the belief that salesmanship is partly knowledge of the product being offered; partly honest faith in the principal being represented, and partly enthusiasm and hard, conscientious effort. The broker or salesman having all these qualities is certain to be more successful than those 'order-takers' that we all know."

The circular was accompanied by several pages of highly condensed information about canned salmon, covering such essential points as the five species; production by species and districts; packing seasons; codes, quality ratings and labeling; contract terms; comparative food value, etc.

New Brokers Appointed For "NEFCO" Salmon

R. Starr Farish, who is sales manager for the New England Fish Co., returning in mid-November from three weeks in the east, announces the appointment of three new brokers for the company's canned fish lines: Crevier, Larsen & Co., Boston; Carl Shorter Co., Memphis, Tenn., and Elggren & Thompson, Salt Lake City.

Mr. Farish and Bill Gilbert, field representative, will represent the New England Fish Co. at the Atlantic City conventions in January, planning to visit their representatives in a number of markets before returning to Seattle.

San Francisco Seiners Haul Sardines Long Way

Many of the 75,000-plus tons of sardines which have made the San Francisco sardine season by far the best in several years have been hauled from as far as San Luis Obispo, according to Capt. Harold Andersen, master of the big seiner *Marine View*, who returned to Seattle for a few days during the early December full moon period.

The long run had kept the fishery from being really attractive, according to Capt. Andersen, who is president of the Pacific Coast Purse Seiners Association.

Steel Fish Scows Prove New Trend

Further proof of the trend toward the use of steel fish scows for handling salmon in Alaska is seen in the recent award of a contract for two scows 60 by 18 by 4.5′ to Flohr & Co., Seattle metal fabricators, by New England Fish Co.

The scows were designed by H. C. Hanson, Seattle naval architect, and the decision to build them of steel resulted from the successful performance of such steel barges in the operations of this company and a number of others over the past several years.

Fortune Fills Line

Fortune Fisheries, San Francisco, is now handling Cuban lobster tails, Cuban frozen lobster, frozen lobster meat, and Danish trout. The sea foods are imported by the Atlanta Trading Co., New York.

F. R. DEVEAU, managing partner of the Island Seafoods Co., Kodiak, recently brought the company's power scow down to Seattle for winter lay-up, but expected to return to Kodiak for Christmas. He says the past season at Chignik, where Island Seafoods' floating cannery operated, was a complete flop, being closed through most of the Red run.

A Continuously Constructive Force in the Salmon Industry . . .

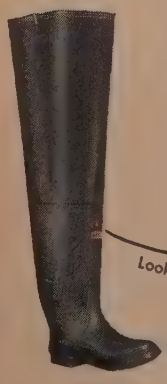
OCEANIC SALES COMPANY

3302 Smith Tower

SEATTLE 4, WASH.

CANNED SALMON

Cable Address
"NAECO" All Codes



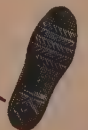
IT STANDS UP

---------in every way---------

A commercial fishing boot with a top that won't flop over! Another Ball-Band extra and another reason why Ball-Band has been first in boot values for over fifty years.

FOR YOUR PROTECTION

Look for the Red Ball TRADE MARK

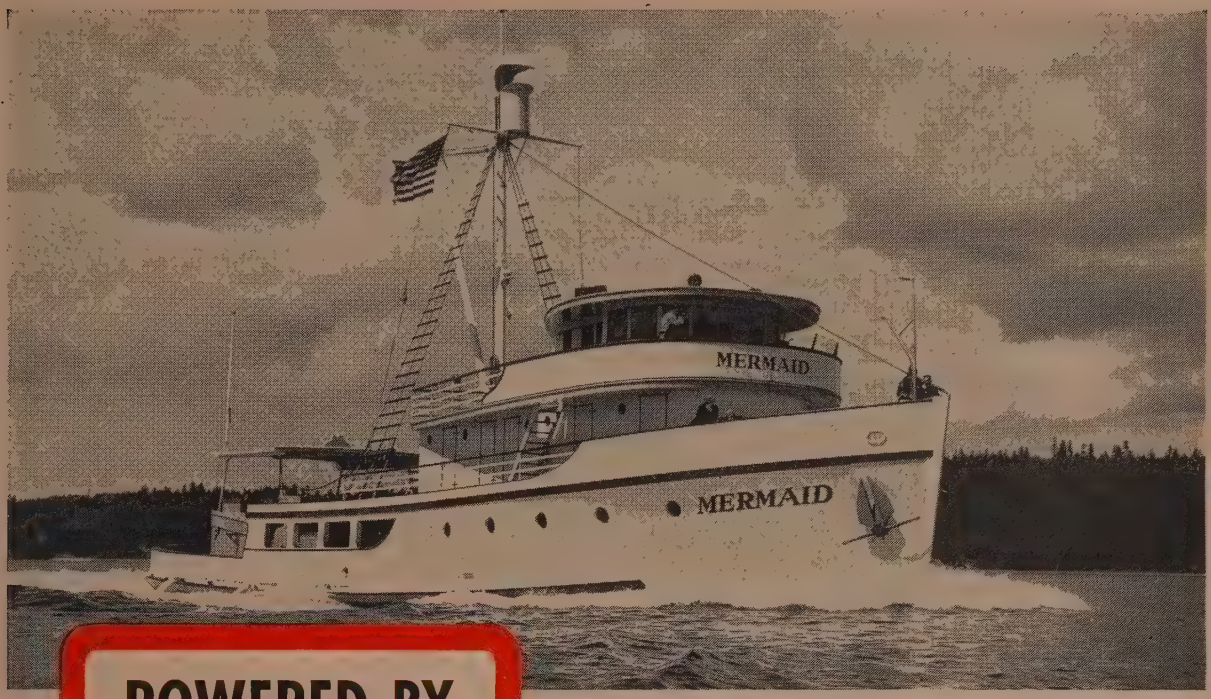


Ball-Band

REG. U. S. PAT. OFF. 1901

Mishawaka, Indiana

TRAWLER FISH!
That's been the specialty of the Consolidated Fisheries Inc. for many years. Write, wire or phone us for your requirements. Branches at Monterey, Pt. Reyes, Fort Bragg, Pittsburg and Eureka.
Consolidated Fisheries, Inc.
425 Washington St., San Francisco 11, Calif.
Phone: EXbrook 2-7012



POWERED BY Superior for an extra margin of safety

● Sudden emergencies and temporary overloads call for an extra margin of safety. What's more, this margin of safety means longer engine life.

That's why fishermen like Superior Marine Diesels. They've found they can get continuous and trouble-free performance at Superior's rated output. And that they can call on a liberal power reserve whenever they need it.

SUPERIOR DIESEL DIVISION
THE NATIONAL SUPPLY COMPANY
Plant and General Sales Office: Springfield, Ohio

Here are other reasons why Superior is your best buy...

1. Fuel Economy
2. Precision Bearings
3. Heavy Rigid Crankshafts
4. Strong Bases and Cylinder Blocks
5. Proved Roller Chain Camshaft Drive
6. Oil Cooled Pistons.

One of our representatives will be glad to show you how these features can help you. Just write and tell us when he can call. Or, if you prefer, send for our fully illustrated 28 page booklet.

THE NATIONAL SUPPLY COMPANY NSCO

Superior DIESELS built for marine service

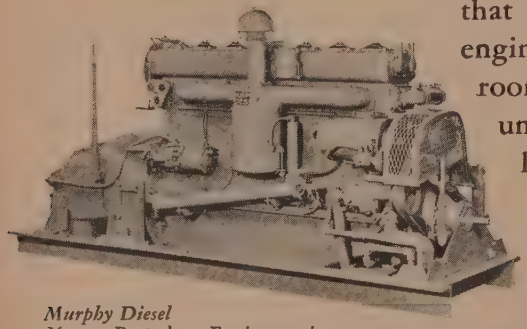
The best partner for YOUR BOAT

MURPHY DIESEL POWER

GOOD PARTNERS FOR GOOD FISHING . . .

...the "*Pine Leaf*" and her 150 H.P. Murphy Diesel. She is owned by the Anglo British Columbia Packing Co., Ltd., Vancouver, B.C. She is 73' x 15'2" x 7'2"; 52 gross tons; 22 net tons. Through a 3:1 reverse and reduction gear, her 150 H.P. Murphy Diesel turns the 50" x 35" three blade wheel at 400 rpm. Watch the trend to Murphy!

● A fisherman's engine—the best partner your boat can have. It's the kind of power that makes bigger profits. And that's the kind of engine you have with a Murphy Diesel in the engine room. A compact, heavy duty "true" diesel with unit fuel injection, the Murphy gets more out of less fuel. Before you build your new boat or repower an existing one, talk to your Murphy Diesel Dealer. He'll give you the whole story on why Murphy Diesel will make more money for you.



Murphy Diesel Marine Propulsion Engines and Auxiliaries, 90 to 190 H. P.; Generator Sets 60 to 133 K.W.

MURPHY DIESEL COMPANY
5301 W. Burnham St., Milwaukee 14, Wisconsin

MURPHY DIESEL

GET FULL INFORMATION FROM YOUR NEAREST DEALER

SAN FRANCISCO, CALIFORNIA—Oswald Machine Wks., 2936 Hyde St.
PARAMOUNT, CALIFORNIA—MacCallum Co., Box M, Clearwater St.
SEATTLE, WASHINGTON—Alaska-Pacific Supply Co., 2412 Market St.
VANCOUVER, B. C.—Lipsett Engine & Mfg. Co., Ltd., 1315 Powell St.

Echo-Sounder Spots Unseen School Of Herring That Yields 1,180-Ton Set

Something close to an all-time record for a single set of herring off the British Columbia coast was achieved by Nelson Bros. Fisheries' seiner *Western Ranger* Nov. 2, with a haul of 1180 tons of fish.

All-time top score for herring taken in a single set was tallied by B. C. Packers' *Eastisle* in 1948 with 1240 tons in Esperanza Inlet.

Western Ranger's catch, apart from its size, was notable for the fact that the area was shrouded in fog which fortunately lifted to some extent just as the set was made.

Captain Hans Stoilen is skipper of the *Western Ranger* and he made his set soon after his echo sounder revealed the presence of a large school of herring. *Western Girl,* the flagship of the Nelson Bros. fleet, was close by under the command of the veteran high-liner Captain Charlie Clark, who has a few records of his own to his credit. The two boats were in constant radio telephone communication with each other while the operation was being completed, and fishermen and shore stations over a wide radius listened in while the big set was being made.

It was a big day for herring fishermen off the east coast of Vancouver Island. The big set was made near Courtenay in the Gulf of Georgia, but on the same day vessels of B. C. Packers, Ltd., and The Canadian Fishing Co. were taking in a total of more than 2000 tons for each company, while Nelson Bros.' fleet, boosted by *Western Ranger's* phenomenal haul, reported 2610 tons for the day.

Grand total for the 24-hour period in Lambert Channel where *Western Ranger* and other craft were operating that day was 7925 tons, and nearly all the fish were actually taken during a 12-hour stretch. This is probably an all-time high for a period of that duration. There were about 40 seiners and packers in the Middle East Coast district at the time.

The big harvest of Nov. 2 was sufficient to close out the season in that area, where the quota had been set at 10,000 tons. From the Middle East Coast most of the seiners moved back to the Lower East Coast to fill the quota of 40,000 tons, where 33,000 tons had been caught earlier in the season in that district.

With the two East Coast quotas filled, the fleet shifted to the West Coast of Vancouver Island where there are no quota restrictions. Herring ordinarily do not start schooling up there until considerably later than in the other districts.

But there was plenty of evidence that 1949-50 would see an unusually heavy herring harvest. Most of the herring is going to the reduction plants this year as there has been little demand for the canned pack. At November 17, 263 cases had been canned, however, and production of meal totalled 4,339 tons; of oil 693,805 imperial gallons.

There was a big carryover in 1947 and 1948 of canned herring, but the opening of the current season saw most of it cleared up, Hong Kong taking a large proportion of it for sale in the Orient. Some of the operators canned herring this year simply because they had a large supply of cans and tomato sauce, and it seemed to be good policy to pack and take a chance with the market rather than continue to be stocked up with containers and sauce.

R. Starr Farish Advanced By New England Fish Co.

R. Starr Farish, who has been assistant sales manager of the New England Fish Co., Seattle, for a number of years, was advanced to the position of sales manager of the company January 1, according to an announcement by Harald Synnestvedt, president and general manager.

As sales manager, Mr. Farish succeeds to the position held by his father, the late R. R. Farish, who was Nefco sales manager for many years prior to his death in 1942.

In addition to handling sales of the company's canned salmon, tuna and crab, Mr. Farish will also be responsible for sales of Nefco Chillets, the company's line of packaged frozen fish.

Starr Farish joined the sales department of the New England Fish Co. in 1938, returning to it after naval service in World War II. Before entering the company's service he had five years of experience with brokerage houses in the canned food trade.

Pacific Fisheries Technologists Organize

With 66 persons attending, a meeting of technologists interested in fisheries, held at the U. S. Fish and Wildlife Service technological laboratory, Seattle, Dec. 9, decided to undertake a permanent organization to be known as Pacific Fisheries Technologists.

Harry Beard, research director of the New England Fish Co., and also chairman of the Technological Section of the National Fisheries Institute, was elected chairman, with Bruce Sanford of the FAWS Seattle laboratory as secretary.

Membership of the executive committee was selected as follows: Dr. R. W. Clough, Maurice Stansby, Lyle Swain, Dr. Edward Harvey, Norman Armstrong.

Dr. R. W. Clough, Northwest branch, National Canners Association; Maurice Stansby, Seattle technological laboratory, U.S.F.A.W.S.; Lyle Swain, Fisheries Experimental Station, Vancouver, B.C.; Dr. Edward Harvey, Food Products Laboratory, Astoria; Norman Armstrong, British Columbia Packers, Ltd.; Roger W. Harrison, Lyle Branchflower Co., Seattle; Elzie Reed, New England Fish Co., Astoria.

Arrangements were made for a spring meeting to be held at Seattle Feb. 24 and 25.

Oxnard Plant Improved

Oxnard Canners, Inc., Monterey, has installed a new 5-oz. round can line for sardines. They have put in a new Continental Can Co. closing machine, and a new pre-cooker, with Link-Belt chains.

Campbell Machine Company's softball team, composed of personnel from every department of the yard, won the 1949 championship for the San Diego county league, and thereby won four trophies. Manager of the team was *BUS HAWTHORNE*, with *CHET JORDAN* the star pitcher, both of the pipe-fitting department. Other top players were *EDDIE MYERS*, purchasing department, and *BERT NICHOLS*, machinist, according to *GEORGE CAMPBELL*.

Quality Always

FOR many years, the canned salmon industry has utilized its resources to give consumers a better product, constantly improving production and distribution methods.

Today, the industry offers with pride a consistently fine basic food that is rich in nutritional value, appetite appeal and adaptability to modern mealtime needs.

A one-pound can of salmon contains enough health-building goodness to feed a family of four a delicious, satisfying meal. High in protein content, it boasts many other essential food requirements also. *Canned salmon is actually an economy food!*

All the facilities of Pacific American Fisheries are pledged to continued development of the industry.

PACIFIC AMERICAN FISHERIES, Inc.
South Bellingham, Washington
"Quality Always"
SALES SUBSIDIARY: DEMING & GOULD COMPANY, SOUTH BELLINGHAM

ALASKA SALMON INDUSTRY, INC. ELECTS C. F. JOHNSON PRESIDENT

C. F. Johnson of the Port Ashton Packing Corporation was chosen president of the Alaska Salmon Industry, Inc., at its tenth annual meeting, held in Seattle Nov. 29. He succeeds E. E. Murray of the Alaska Pacific Salmon Co. and Bristol Bay Packing Co., who retired after three years of service.

Mr. Johnson, though counted among the younger men of the industry, has had long experience, with increasing responsibilities. For some years he has been active in the packers' cooperative activities, and has served as president of the Northwest Salmon Canners Association.

All other officers were re-elected: A. R. Barthold and Vance F. Sutter, vice-presidents; Leo T. Kreielsheimer, secretary-treasurer, and A. C. Arnold, managing director.

The only changes in the board of directors were election of a new group — Henry J. Emard of the Emard Packing Co.; Jack Lind, General Fish Co., and Capt. C. E. Anderson of the Seldovia Bay Packing Co.—to represent the *Cook Inlet* area, and substitution of Stanley G. Tarrant for J. A. Green of Pacific American Fisheries, Inc., for the northern part of *Southeast Alaska.* Directors for other districts are:

Bristol Bay—Guy V. Graham, Mr. Barthold and Wm. B. Wootton;

Alaska Peninsula—Mr. Murray, E. M. Brennan and Starr H. Calvert;

Kodiak—O. L. Grimes, Mr. Kreielsheimer and Harold M. Parks;

Cordova District—Oscar Bergseth, Mr. Johnson and Milton G. Brown;

Southeast Alaska, north—Mr. Tarrant, A. R. Brueger and Frank Wright;

Southeast Alaska, south—A. W. Brindle, H. B. Friele and Fred Gunderson.

Research Progress Gratifying

Reviewing the year's developments, Mr. Murray declared the biological research program, sponsored by the industry and carried on by the Fishery Research Institute of the University of Washington, is making 'gratifying progress," and noted that President Raymond B. Allen of the University is taking a personal interest in the work. Some aspects of the program were discussed in detail in an address by Dr. Wm. F. Thompson, director of the Research Institute, which is presented under separate head.

Alaska Salmon Industry, Inc., was first organized to deal with labor problems, but it has, of necessity, grown to cover a much broader field; and Mr. Murray said its scope still continues to expand, as new problems arise and there are more official agencies to deal with. He referred, in passing, to the Industries participation in the Pacific Fisheries Conference, dealing with national and international affairs; in the Coordinating Committee of the Canned Salmon Industry, by which problems of the industry as a whole are channeled to the appropriate agencies; and in the conference at Juneau last January with Alaskan authorities on the territorial Safety and Sanitation Code, which has since been adopted and was recently published.

Mr. Murray also reviewed a number of court decisions (most of which were favorable to the industry) and various legislative matters, federal and territorial, which especially concern the salmon packers.

On recommendation of the finance committee, it was decided to make a reduction of 1c per case in dues of the Industry organization, which for 1950 will be on the basis of 4c per case on each member's 1949 output.

Mr. Arnold, speaking of the labor situation, referred to the possibility of jurisdictional conflicts affecting the new year's operations. Other speakers, in addition to Dr. Thompson, were Dr. Raymond E. Seth and C. Moriarty, secretary of the Associated General Contractors of Alaska. Dr. Seth pointed out that, under recent Alaska legislation, it is now *definitely required* that every prospective non-resident employe, before going to Alaska, must undergo physical examination by a competent physician. Mr. Moriarty offered the suggestion that his organization and the Salmon Industry might well cooperate in meeting common problems.

Robert Ladd of the Plymouth Cordage Co., who will come to the Pacific Coast in January to represent Plymouth in the Pacific Northwest and Alaska under the direction of W. C. Bryant, Pacific district manager with headquarters in San Francisco. This picture of Mr. Ladd was taken at Coronado, Calif., in November when he came to attend the Association of Pacific Fisheries convention with Bartlett Bradley, sales manager.

Anderson's Headquarters Now at Seldovia

Since he became Mayor of Seldovia, Alaska, Capt C. E. "Squeaky" Anderson has moved the main headquarters of his enterprises, Seldovia Bay Packing Co. (formerly Alaska-Seldovia Packers, salmon cannery) and Seldovia Fisheries Co. (fish freezing, etc.,) to that town, where a year-round office is maintained, with Ralph Pixton in charge when "Squeaky" is away. The Seattle offices of these concerns were recently moved to 661 Olympic National Bldg.

Since the fishing season Capt. Anderson and his chief assistant, Harry Tallman, have been almost "commuting" back and forth between Seldovia and Seattle, where their presence is necessary much of the time through the winter.

Capt. Anderson recently loaned a dock winch from his plant to Rev. Oscar Olson to be used in rigging up a ski run for the young folks of Seldovia.

Rugged 65-Footer Works Crabs Out of Yaquina

The rugged, rounded hull form favored by builders down the Oregon coast characterizes *Margaret E,* a brand new 65-footer which Bert Erickson of Newport, Ore., put to work this winter fishing crabs out of Yaquina Bay.

The boat was finished up in November at the Siletz Boat Works.

Power picked by Erickson for his beautiful craft with her bridge deck and elevated pilot house is a 150-hp. Lorimer diesel.

SINCE 1895

KELLEY-CLARKE COMPANY

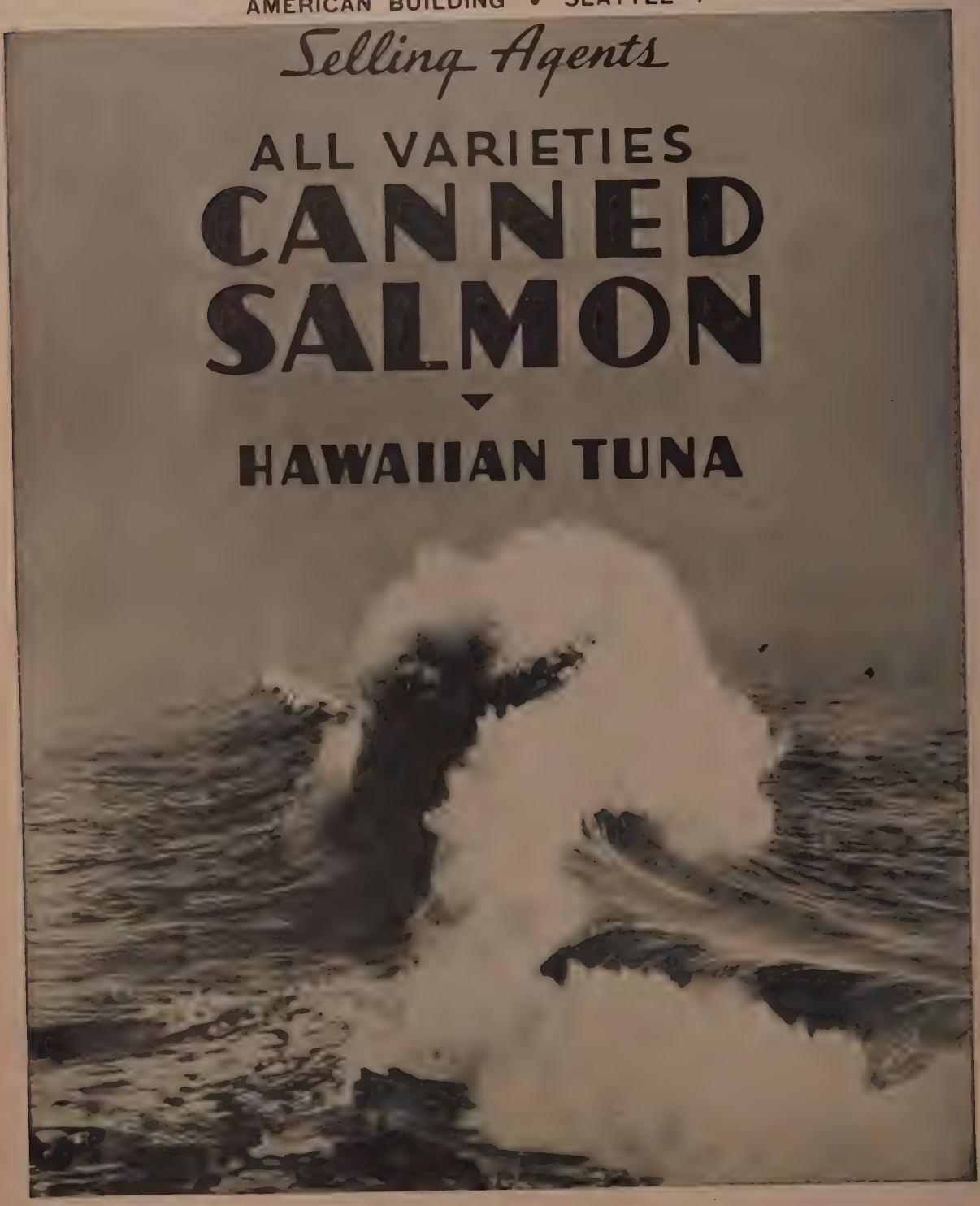
AMERICAN BUILDING • SEATTLE 4

Selling Agents

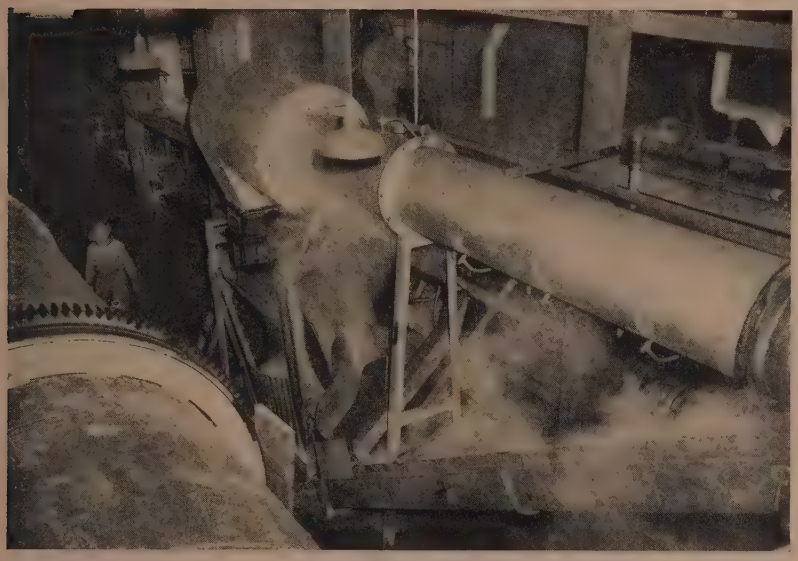
ALL VARIETIES

CANNED SALMON

HAWAIIAN TUNA



Full-Utilization Program in B. C. Accelerated by Additional Equipment



P & L continuous dewatering press in operation at Nelson Bros. Fisheries' herring reduction plant at Steveston, B. C. Note the exceptionally small size of the press—located in lower center of the picture directly below the drop light. Dryer on the left and cooker entering the photo from the right.

Several British Columbia fish handling plants have recently installed by-products equipment for making more complete use of material that would otherwise be wasted in processing; and for achieving economic utilization of species such as herring, for which the market of the canned product is currently unfavorable.

The installations represent a long stride taken by the industry towards fuller integration of processing and maximum utilization of the raw material.

In seeking this overall objective operators have recently installed several P & L continuous dewatering presses and auxiliary equipment. At present, Nelson Brothers Fisheries, Ltd., has four of these units installed: two at the Ceepeecee plant on the west coast of Vancouver Island; one at Port Edward; and one at Steveston. B. C. Packers, Ltd., has one of these machines at its Alert Bay reduction plant on the west coast of Vancouver Island and another at its subsidiary Western Whaling Corporation plant at Coal Harbor. Gordon Young (B.C.), Ltd., is installing a machine at its plant near the mouth of the Fraser River.

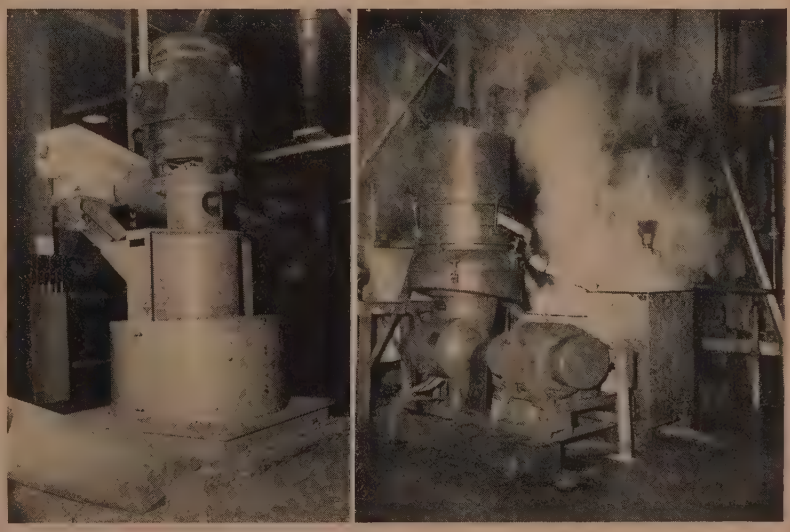
Most of these operations use the presses for herring, which they handle at an average of about 8½ tons an hour. However, at Port Edward the Nelson Bros. plant has found effective use for its equipment in converting halibut and salmon offal into stock and poultry feed meal. It is expected such machines will find increased use in the future in the B. C. salmon industry as operators seek to make the fullest possible use of everything left over from canning.

The P & L presses are made by P & L Welding & Machine Works, Anaheim, Calif., and are usually equipped with variable speed units manufactured by U. S. Electrical Motors, Inc., of Los Angeles. It has been found that with these so-called "Vari-Drive" motors, instead of constant speed units, it is possible to move the presses from one plant to another according to the seasons with a minimum of inconvenience. Such flexibility naturally affords an opportunity of keeping the machines in operation for a longer period during the year, thus accounting for substantial saving in operating cost.

In adapting the machines for use in British Columbia fisheries, only a few minor readjustments have been necessary, mainly in changes to the feed screw. An old problem in handling salmon offal has been the difficulty of separating foreign material. Regardless of precautions,

On the left—P&L vertical hammermill or disintegrator used for grinding meal from salmon offal or herring or other fish material after passing through the press and dryer.

DeLaval Separator, Model ACDO is pictured on the right, separating oil from press liquor at the rate of 3,500 gallons of liquor per hour in the Steveston, B. C., reduction plant of Nelson Bros. Fisheries, Ltd.



For the Tables of the Nation

Prime Quality
FILLETS
QUICK-FROZEN

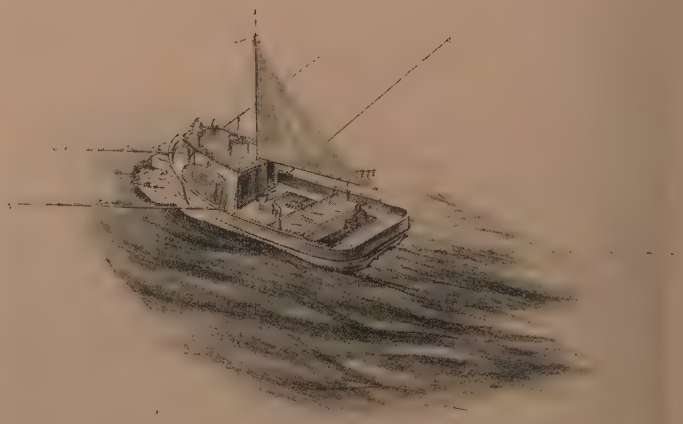
All varieties of North-Pacific fish

ROCKFISH • PETRALE SOLE • ENGLISH SOLE • TRUE COD • LING COD
SABLEFISH • HALIBUT • SALMON

EARDLEY FISH & FILLET CO., INC.
PIER 62 PHONE SEneca 0755 SEATTLE 1, WASHINGTON

COMPLETE TROLLER OUTFITTING

McBain Gurdies
Stainless Steel Strand
Nylon Leader Line
Swivels, Snaps, etc.
Canadian Wonder Spoons
Wallace and Martin Plugs
Hooks and Gaffs
Shock Absorbers
Trolling Springs
Trolling Stabilizers



MARINE SUPPLIES
SUNDE & d'EVERS CO.
COLMAN DOCK (PRONOUNCED SUN-DE & DE-VARE) SEATTLE, WASH.

such things as cannery workers' gloves and cans get into the offal bins and conveyors and, unless detected and removed in time, work their way into the cooker screw. Magnetic apparatus has been installed in some instances to separate the cans and other metal, but the gloves still occasionally cause a jam and once in a while a persistent seagull goes through the works.

Herring or salmon offal is delivered from the bins by conveyor and elevator to the cylindrical cookers of conventional design. From the cooker the material is fed to the dewatering press. The solids, or press cake, then goes to the P & L vertical hammer mill or disintegrator for grinding before drying. Stock and poultry feed thus produced has a protein content of about 70 per cent.

Liquid from the P & L press, separated from the solids, is pumped to the settling tank, then to the foots reel and the centrifugals or some other type of separator or sludger for extraction of oil. From there it goes back to the oil storage tanks. In the Nelson Bros. plant at Steveston the oil is recovered by means of DeLaval centrifugal separators.

Residual liquid after extraction of the oil may be utilized in a stickwater plant. B. C. Packers at present operates the only plant of this kind in British Columbia at Steveston.

At the University of Washington in Seattle a pilot plant is to be equipped with similar presses and auxiliaries for experimental work in connection with processing of salmon offal under the direction of Dr. Waldon H. Hastings.

P & L presses have been used satisfactorily with wood pulp, sawdust, grass and peat as well as fish products. All British Columbia installations have been made by Grove Processing Equipment, Inc., Vancouver and Seattle.

Simplicity of the P & L continuous dewatering press is featured by simplicity of design. It is said to water any material that is fibrous enough to pack. The material enters the press at the top and falls between large revolving discs, turning on tilted trunnions so that the discs come close together while rotating. The pressure forces liquids through screen plates in the discs, while press cake is discharged continuously at the back of the press, opposite the intake. The press operates slowly and the working parts are comparatively few.

There are six steel screen plates or press plates on each disc. The screens or perforated plates of brass or steel are riveted to the press plates, which are so constructed that only two bolts are needed to hold them in place.

Size of the P & L press is one of its noteworthy features, as overall dimensions are only 75" wide, 82½" long and 68" high.

Foremen Must Study Alaska Safety Code

It will be necessary for all Alaska cannery and other fish-plant foremen to familiarize themselves with the territory's new Safety and Sanitation Code before next season—and other executives, owners, etc., should also fully understand its requirements.

This was made clear in discussion at the pre-Thanksgiving meeting of the Northwest Salmon Canners Association, when it was announced that a number of packers had received printed copies of the code (supposed to have been issued last spring), and all were expected to receive them shortly.

Though far more practical and less drastic than the provisions first proposed, the code is very long and goes into great detail. From casual examination, it does not appear that important changes will have to be made in many existing plants, but the requirements as to new installations are rather rigorous.

Clipperman Sues City

V. C. Collier, owner of the San Diego tuna vessel *Greyhound,* last month demanded $5,429 damages from the City of San Diego for an accident to his vessel July 28 while moored to the embarcadero. He alleged protruding piling below the surface smashed in the vessel's hull, causing her to be beached.

Sardine Cutting and Fillet Machine Developed

Ray Bentley, Universal Canning Machinery Co., Monterey, Calif., who has introduced many improvements into fish canning techniques, has developed a combination cutting and fillet machine for sardines and similar fish.

A model machine has been installed at the Monterey plant of Sun Harbor Packing Co. On the new combination machine the tail knife can be adjusted so that any length of cut desired can be made for the whole fish cut.

The fillet unit is attached so that it can be engaged whenever desired, or disengaged. The viscera from the fish is removed by a new type of vacuum pump developed by Bentley. The pump is of the piston type, and it has a stainless steel shaft.

Dredging Aids Campbell

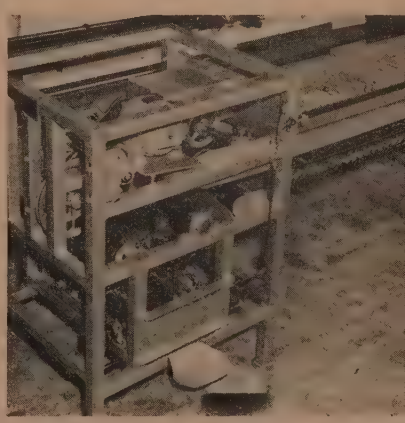
As a result of an extensive dredging operation for the construction of the 10th St. industrial pier in San Diego harbor, Campbell Machine Company, whose yard is adjacent, will have an opportunity to put into service three drydocks the company has had for some time. Now, with water dredged to 35' at low tide, two 1,000-ton floating docks and one 400-ton dock are to go into service around the end of January. This will give the pioneer tuna clipper yard double the present capacity for haul-outs.

Clipper Engineers Get Own Union Unit

Machinists' Lodge 389, AFL, San Diego announced early in December the formation of a separate unit of clipper chief engineers and assistant engineers who, up until now have been grouped with shipyard workers. The new group is known as Lodge 389E.

New officers are: Hugh G. Maxwell, president; William P. LeCompte, vice president; Charles E. Whitehurst, recording secretary; Harry Justice, financial secretary; Paul Malone, treasurer; Franklin A. Diamond, conductor; Dennis Morris, sentinel. Trustees: O. E. Hitchcock, Robert J. Hitchcock and Archie E. Easley. George R. Maker is business agent.

Combination sardine cutting and filleting machine developed by Ray Bentley of Monterey.



SAN JUAN BRAND

TRADE MARK

Producers of

Fresh - Frozen - Salt - Smoked - Canned

Pacific Coast Fish Products

San Juan Fishing & Packing Co.

Foot of Stacy St. **SEATTLE 14, U. S. A.**

Mr. Fisherman:

Top CASH Prices paid for all species of fish livers based on actual vitamin content. We will test them for you at once or accept assays of any recognized commercial laboratory. Assay equipment at our own stations in Everett, Blaine, and Seattle, Washington, and Astoria, Oregon, for your convenience. Our agents at other ports can give you top service.

WASHINGTON LABORATORIES

Pier 66, Seattle 1, Wn. ELiot 6356 INCORPORATED **Plants: Seattle, Wn., and Vancouver, B. C.**

BUYING STATIONS AND AGENTS

Cordova, Alaska	Cordova Fish & Cold Storage Co.	Aberdeen, Washington	Washington Fish Co.
Ketchikan, Alaska	Whiz Fish Products Co.	Bellingham, Washington	North Pacific Food Products
Petersburg, Alaska	Knute Thompson	Bellingham, Washington	Dahl Fish Company
Port Williams, Alaska	Washington Fish & Oyster Co., Inc.	Westport, Washington	Kaakinen Fish Company
Sand Point, Alaska	Aleutian Cold Storage Co.	Hoquiam, Washington	Paragon Fish Company
Sitka, Alaska	McCallum-Legaz Fish Co.	Bay Center, Washington	Haines Oyster Company
Wrangell, Alaska	R. A. Armstrong	Coos Bay, Oregon	Chas. Feller
Juneau, Alaska	Alaska Coast Fisheries	Port Orford, Oregon	Port Orford Fish Co.
Pelican City, Alaska	Engstrom Bros.	Eureka, California	Tom Lazio Fish Company
Prince Rupert, B. C.	Canadian Fish & Cold Storage Co., (Subsid. of B. C. Packers, Ltd.)	San Francisco, California	Frank Alioto Fish Company
		Santa Barbara, California	George V. Castagnola Sea Foods
Anacortes, Washington	Consolidated Fish Co.	Los Angeles, California	George V. Castagnola Sea Foods
Anacortes, Washington	Sebastian-Stuart Fish Co.	So. Calif. & Mexico	George V. Castagnola Sea Foods

BRIDGE RADAR "TALKS" BOAT TO VANCOUVER IN PEA-SOUPER

To Captain Joe Gregory of B. C. Packers' 73′ packer *Tatchu* goes the honor of being the first navigator to take his vessel into Vancouver harbor by "remote control."

Early in November fog hung so thick in Vancouver harbor that veteran skippers were having their troubles operating in waters as familiar to them as their own galley under normal conditions.

One of them was Gregory as he and the *Tatchu* approached Lion's Gate bridge at the harbor entrance. Gregory couldn't see the bridge, nor could the bridge signalman above—Bob Sneddon. But Sneddon was watching the little blob of light on the bridge radar apparatus, and the little blob was the *Tatchu*.

Sneddon signaled Gregory by radio telephone and told him he would guide the *Tatchu* to port if he followed instructions.

"We just left everything to the signalman on the bridge," reported Gregory. "The fog was so thick we couldn't see the second light on the mast. Probably we could have made it, using our echo sounder and compass, but it wasn't worth the risk.

"Then I remembered the radar set on the bridge and telephoned the signalman. Radar took over after that. They started to guide us when we were abreast of Point Atkinson, warned us when we were approaching two tugs with log booms and then off Brockton Point told us it was okay to turn into Coal Harbor.

"It's a good rig and I'm going to tell all the fishermen about it. Any boat with a standard 1630 kilocycle radio band for contacting the Lion's Gate Bridge has no excuse now for running aground in the Narrows."

Three large Vancouver fishing vessels ran aground near Steveston during the heavy fog of the same period. The 77′ B. C. Packers' fishpacker *Koprino* ran ashore below the old Canadian-Scottish cannery site, and Canadian Fishing Co.'s 67′ packer *Nordic,* which went to her assistance, also grounded. About the same time, Anglo-B. C. Packing Co.'s 67′ packer *Sea Ranger* hit a sandbar. The three packers had been carrying herring to the Steveston reduction plants.

Two Canadian Fishing Co. seiners, *Cape Scott* and *Cape Bathurst,* grounded in the Hornby Island area, and Francis Millerd & Co.'s 110′ packer *Gryme* piled up near Porlier Pass.

In no case, however, was serious damage caused and refloating was effected without much delay.

California Albacore Catch Greatest Ever

Southern California's Albacore season, one of the longest and certainly the most productive in history was practically closed when December began, although a few "die-hards" were still searching for the Longfins at Guadalupe Island, Lower California. The season had produced 20,000 tons, nearly 5,000 more tons than in 1948.

The opening raw price of $400 per ton had dropped in early fall to $350, when the large percentage of a great fleet, estimated between 1,000 and 1,500 boats, with every port along the Pacific represented, quit for the season.

The season opened in mid-June, gained its greatest impetus in July when San Diego received 5,058 tons and Los Angeles harbor 2,348 tons. November saw 173 tons delivered at San Diego; 57 tons at the northern port. Total for the season, although not yet complete, was San Diego, 12,220 tons; Los Angeles-Long Beach harbors, and including Newport harbor: 7,737 tons. In mid-December Van Camp Sea Food Company received small fares as evidence Albacore is still making a long visit to the upper waters of Lower California.

Sperry Officials Study West Coast Fishery Applications

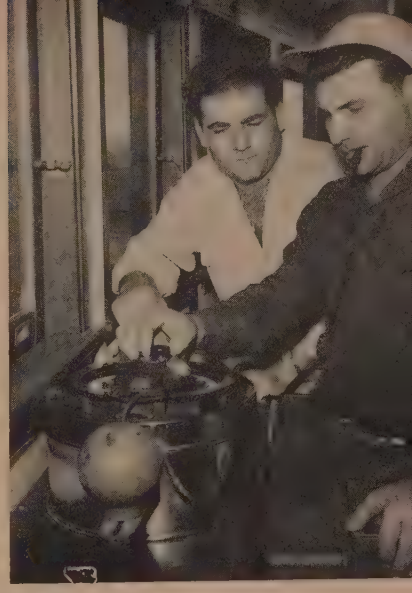
For the particular purpose of studying the application of Sperry Gyroscope Co. instruments and machinery in the Pacific Coast fishing industry, J. A. Fitz, Sperry director of advertising, and S. W. Bedell, Sperry sales services manager, recently visited the company's western branch offices.

At Seattle they consulted with H. S. Burtis, district manager, and C. E. Dalgleish, district marine superintendent.

Going on to San Francisco, the Sperry executives conferred with W. F. Horn, district manager; and then went on to Los Angeles, where they spent some time with W. I. Selover, district manager for Southern California.

Mr. Fitz, Mr. Burtis and Mr. Selover were three of the four original service engineers for the Sperry company, their service going back more than 32 years.

CHRIS PEDERSEN, skipper of the seiner *Invader* has installed a Nordberg gas engine in the seine skiff of his vessel.



Navigator Louis Sitta, left, and Capt. Sal Alioto of the tuna clipper *Commander,* operating the new Sperry magnetic compass pilot recently installed in the vessel at San Diego. This single unit, with a Kelvin-White 8-inch compass and a controller mounted on top, operates with the steering engine. Captain Alioto has his hand on the knob by which the course is set. *Commander* was built by Birchfield Boiler, Tacoma, and is owned by Al Davies.

"Sun Jacket" Lost On Galapagos Reef

Loss of the 58′ baby tuna clipper *Sun Jacket* at the Galapagos Islands was reported in early December when the owner-skipper, Don Byrd, and his wife arrived at San Diego. The vessel ran aground on November 24 during the night and broke up within an hour. Capt. and Mrs. Byrd and four crew members rowed 10 miles in two skiffs before being picked up by the San Diego clipper *Heroic.*

Formerly part of the Sun Harbor fleet, the *Sun Jacket* left last January to fish for the Colombian government. The wreck ended what was to have been the vessel's last fishing trip in this service before returning to her home port, San Diego.

Petrich Sues for Tax Aid On Second Vessel

Having won his tax case in the San Diego courts relative to the tuna clipper *Sherry Ann,* and from which no appeal has been made to higher courts by the county tax assessor, Hervey Petrich is now suing in the Los Angeles courts regarding excessive taxes against the seiner *Dolores M,* this vessel, like the *Sherry Ann,* being registered out of the state.

A Fisherman depends on his Boat !

You know the old saying about a carpenter and his tools! It may hold true for a carpenter, but with a fisherman it's different. If his boat is poorly built, or unseaworthy or faulty in some way—he won't come in with the high catches! That's why AVONDALE TUNA CLIPPERS are queens of the fleet—because a fisherman knows they'll stand up to a sea, that they'll range with the best, that everything to the last scupper is designed and built to perform with the best. And then too—AVONDALE CLIPPERS are built of STEEL!

Avondale Marine Ways, INC.

MAIN PLANT: AVONDALE, LA. QUICK REPAIR PLANT: HARVEY, LA.

LUBRICATION ECONOMY

LUBRIPLATE SAVES 7 TIMES ITS COST!

This remarkable saving was reported to us by the Wolverine Shoe & Tanning Corporation of Rockford, Michigan. Their unsolicited letter stated—"*For every dollar we pay for LUBRIPLATE Lubricant No. 100 we save $7.00 in chain replacements*". You, too, can enjoy the savings made possible with LUBRIPLATE Lubricants.

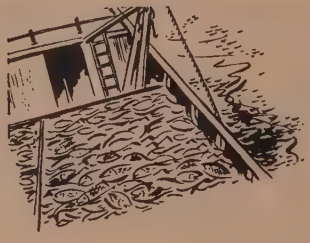
1. LUBRIPLATE reduces friction and wear
2. LUBRIPLATE prevents rust and corrosion
3. LUBRIPLATE is economical to use

Write today for case histories of savings made through the use of LUBRIPLATE in your industry.

LUBRIPLATE DIVISION
Fiske Brothers Refining Co.
Newark 5, N.J. Toledo 5, Ohio

The Different LUBRICANT!

DEALERS EVERYWHERE, consult your Classified Telephone Book

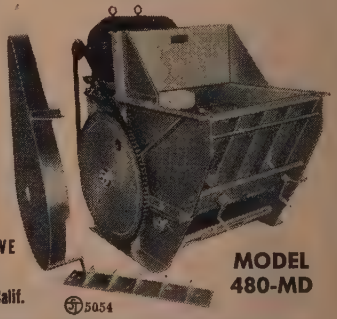


CRUSHED ICE COSTS LESS WHEN G-W's ABOARD

You get all the crushed ice you need, when you need it, graded in sizes to suit your requirements, when you have a G-W Ice Breaker aboard or at wharf-side. Besides, you save money: you crush ice when you're ready for it, save shrinkage losses; sturdy steel body construction, means long, trouble-free life.

Heavy duty Breaker, illustrated, crushes up to 50 tons per hour. Other economical models available. Write today for new Bulletin No. 482 for complete information on G-W Ice Breakers.

G-W ICE BREAKER



MODEL 480-MD

5054

PACIFIC COAST REPRESENTATIVE
Western Ice Equipment Co.
420 Market St., San Francisco 11, Calif.

GIFFORD-WOOD CO.

NEW YORK 17 — 420 LEXINGTON AVE.
Since 1814 — Hudson, N.Y.
CHICAGO 6 — 565 W. WASHINGTON ST.

"Southern Seas" Shrimp Campaign Launched

A sales promotion and advertising campaign for "Southern Seas" shrimp has been launched by Wilbur-Ellis Company, major supplier of seafood from Latin American waters. Wilbur-Ellis reports that, despite a marked increase in production, the demand for fine Mexican shrimp continues to run ahead of supply. Restaurants account for much of the increased consumption.

In the last seven years, shipments of fresh frozen shrimp from the Gulf of Mexico have climbed from a few hundred pounds to more than 15 million pounds this season, according to Wilbur-Ellis Company. This tremendous increase in popularity is due to the large size of "Southern Seas" shrimp, with counts as low as 12 to the pound, as well as to the delicious flavor of this seafood. French fried shrimp are now a staple item on many restaurant menus, as well as shrimp cocktails, salad and casserole dishes.

To accommodate this growing demand, Wilbur-Ellis plans to hold stocks in frozen storage between seasons. These stocks are now being accumulated from improved packing and freezing facilities at lower California ports.

New Shrimp-Freezer Building in Mexico

A new shrimp sharp-freezing plant, located in the northern waters of the Gulf of California, to be known as Productos Congelados de Santa Clara, S.A., was well along in construction in December. It is located at El Gulfo, south of San Luis, state of Sorona and situated almost at the apex of the sea.

Owners are General Abelardo L. Rodriguez, Francisco Morales, Jr., Juan Sanchez, Jose Gutierrez and A. L. Verduga. When the plant is in operation the frozen shrimp will cross the international border for U. S. distribution under the "Ocean Garden" brand of Marine Products Company.

Abalone Trade Resumed

General Fish Corp., Monterey, Monk Loero, manager, is back in the abalone business again for the first time since 1941.

G. Nishiguchi, veteran diver, has been contracted, and so far has produced about 960 doz. abalone. He uses the 38′ diving boat *Patricia Lee*.

Monk has provided a well lighted and well equipped room for processing abalone at the Monterey plant.

Fleet of five 54-foot welded-steel shrimp trawlers as they were readied for launching in October at the San Diego plant of National Steel and Shipbuilding Corporation. The vessels are shown here on the 340-foot extension of one of National Steel's marine railways. The trawlers carry Atlas diesels, driving through Monel shafts.

5 Steel Trawlers Join Mexican Shrimp Fleet

The rapidly expanding shrimp and fresh fish industry centering in the Gulf of California has been given further impetus by the addition of five new steel trawlers built for Pesquera de Topolobampo, S. A., Topolobampo, Mex., by National Steel & Shipbuilding Corporation, San Diego. Names of the draggers are: *Macapule, Siboney, Colorado, Marivi* and *Altamura.*

This is the second series of steel trawlers built in a year by this firm. The earlier, slightly smaller vessels were built to the order of Productos Congelados, Guaymas. The new series have dimensions of: Length, 54′; beam, 18′; depth, 8′6″. The contract called for delivery within 90 days and this was met. An investment of $250,000 is involved.

The hulls are four-compartment vessels with thwartships framing, longitudinally braced, with continuous engineroom girders, "egg-crated" into transverse floors. This makes a very strong girder effect through the engineroom, since these engine members run from forward to after bulkheads. Keel is a 1 by 5″ flat bar; shell plating and deck is ¼″.

The trawlers were constructed on an assembly line plan, with all work progressing simultaneously, under the direction of construction superintendent Paul Preston. Delivery speed is hastened by a sub-assembly consisting of the entire superstructure all in one piece and with interior arrangements complete before being lowered by crane onto the deck.

The sub-assembly is made of 10-gauge plate and contains the crew's quarters for eight, galley and pilothouse in partitioned rooms. Shrimp is carried in one main hold, this divided into nine compartments with a capacity of 26 tons, held with crushed ice. Fuel capacity is 1,500 gals., with 400 gals. of fresh water.

Propulsion is by an 85-hp. 4-cyl. Atlas Imperial diesel, turning max. 450 rpm. Bronze propellers, 41½″ are turned by 2⅜″ Monel shafts. For auxiliary power needs there is a gas-driven generator. Sharp-frozen shrimp imported for U. S. consumption from Pesquera de Topolobampo, is distributed by Marine Products Company, San Diego and Los Angeles, under its famous brand label of "Ocean Garden."

ROBERT SEARCH, 23, East Monterey sardine fisherman, was drowned in the heavy surf near the mouth of the Salinas River last month, when a giant wave swept him and a fellow fisherman into the sea from the lighter attached to the Monterey purse seiner *St. Expeditus*.

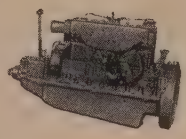
The second fisherman, *JACK POSEY*, of Pacific Grove, clung to the sides of the overturned lighter and managed to reach shore a half hour after the accident. Skipper of the *St. Expeditus* is *NINO RISO* of Oak Grove.

Which *Universal* do You need?

Each is a Better Fishing Motor—
Built For the Sea, Not Converted For It!

Universal Cruiser Six

The outstanding six in the fishing field. Develops an *honest* 90 horsepower with ease and economy. 260 cu. in. piston displacement. Will last the life of your boat, thanks to 100% marine design and construction. It's *built* for the sea, *not converted* for it!

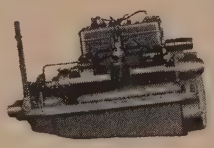


Universal Super-Four

A powerful four of 50 horsepower at 3000 r.p.m. Top performance and low operating costs have made this the preferred in its class. Has such *genuine* marine features as chrome nickel-alloy iron castings to prevent corrosion, larger water jackets for more efficient cooling.

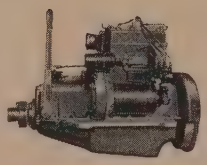
Universal Utility Four

World's most famous 100% marine motor. Thousands power fishing boats. Service is measured by tens-of-years! Economical and dependable beyond belief. 25 horsepower at 2500 r.p.m.



Universal Blue Jacket Twin

Always a favorite of fishermen. Huskily built, smooth and extremely low cost to operate, 12 horsepower at 2200 r.p.m. Magneto or electric starting, built-in reversing gear.



Universal Fisherman

Known and respected everywhere men fish. Absolute dependability, amazing economy, long life. One-cylinder water-cooled. 8 hard-working horsepower at 1200 r.p.m.

New! See the new small Universal 1-cyl., *water-cooled* true-marine lighting plants at your dealer. Safer, quieter, saves on insurance costs! 300 watts to 35 kw.

Write for literature on Universal 100% marine motors and lighting plants today!

Universal 100% MARINE MOTORS

Universal Motor Co.

Founded in 1898

423 Universal Drive, Oshkosh, Wisconsin

THE WORLD'S LARGEST BUILDER OF 100% MARINE MOTORS

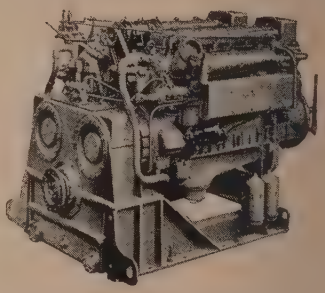
Seattle—Pacific Marine Supply Co. San Francisco—Thomas A. Short Co. Los Angeles—Shepherd Diesel Marine. San Diego—Shepherd Diesel Marine. Honolulu—McWayne Marine Supply Co. Prince Rupert—Edward Lipsett, Ltd. Vancouver—Edward Lipsett, Ltd. Victoria—Edward Lipsett, Ltd.

GM GENERAL MOTORS DIESEL POWER

MORE POWER MORE SPEED

. . . to cut down time between Fishing Grounds and Cannery

GM "Series 71" Diesel engines make money for fishermen because they deliver a real power punch at every down-stroke of each piston. Their compact design means more "fish-hold" capacity.



This is why so many marine craft operators are throwing out old, bulky, heavy engines for sleek, compact, powerful GM Diesels.

Write for Complete Information

GUNDERSON BROS.

ENGINEERING GB CORPORATION

4700 N.W. Front, Portland 14, Ore.

Equipment Division

225 N.W. 14th Ave., Portland 9, Ore.

2200 W. 6th Ave., Eugene, Ore.

Fishermen's Packing Corporation

ANACORTES, WASH.

Canners of

PUGET SOUND SALMON

Our BRANDS

SOCKEYE
"Snow Cap"

COHOE
"Olympic"—"Snow King"
—"Green Breaker"

PINK
"Ocean Spray"—"Waterfall"
—"Ocean Blue"

CHUM
"Golden West"—"Golden Glow"
—"Sea Diver"

Cannery: **ANACORTES, WASH.**

Alaska Fish Oil Plant Re-Located at Auburn

The Ketchikan plant of Alaska Fish Oil Extractors, Inc., was recently shipped south on the boat *Dorothea* by Lyle Anderson, chemist-manager. It will be reassembled at Auburn, Wash. The company will continue to buy fish livers in Southeastern Alaska ports.

Mr. Anderson and his family and M. R. Waters, company employe, and family have moved to Auburn. Difficulty in shipping fish livers north from Seattle was one of the major reasons for moving the plant.

1949 B. C. Whale Kill Exceeds 250

Official figures on the 1949 whale catch off the coast of British Columbia were not available, but the estimate is that about 250 were taken by the fleet of Western Whaling Corporation, subsidiary of B. C. Packers, Ltd., which is the only organization that operated.

This represents a considerable improvement over 1948, when 183 were caught in a short season.

During the year the company made several improvements in the machinery and equipment in use at its station at Coal Harbor, northwest Vancouver Island.

The three vessels used in the whale hunt were *Tahsis Chief, Nahmint* and *Kimsquit.* High point of the season was the taking of two big Blue whales by the *Tahsis Chief,* skippered by Henry Mohle, a veteran of the Antarctic and Newfoundland whaling grounds who was with the west coast company this year for the first time. Creditable performances were given by skippers of the other two ships, serving their first season as whalers.

Although prices for whale products were not particularly high, officials of the company indicated that whaling would probably be continued in the coming year.

New Facilities for American Freezer Co.

The American Freezer Co., Monterey, of which Steve Genovese is president, recently built a handsome new fish receiving station on the Municipal Wharf. The station is complete with electric hoist, latest type scales, a holding tank for squid, and an elevator to be used in dumping squid in the tank.

On the mezzanine floor are offices, box storage, and a York Flake ice machine.

Sand-Washing Machine Speeds Hull Preparation

Anthony Martinolich, president, Martinolich Shipbuilding Company, San Diego, has developed a new type of sand-washing machine which his experience has already shown will clean down a steel hull to bare metal five times faster than conventional methods of sandblasting; or will remove copper paint from a wooden hull as rapidly, yet without injury to wood grain, cement putty or caulking.

The operation consists of combining air, water and sand in a machine, the operational details of which the yard regards as a close secret. Initial use of the machine on the steel clipper *Paramount,* followed by the *Sun Ray* and *Sun Maid;* and then on the wooden clipper, *American Clipper,* was to the complete satisfaction of the owners, according to Mr. Martinolich.

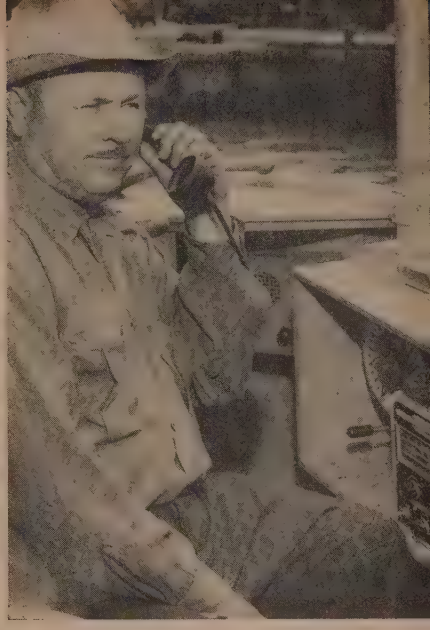
According to the operator, the average time required to dry sandblast an average tuna - vessel hull is around 10 days, with resultant tie-up of the vessel for that period, and with extra labor involved to secure all openings in the hull to exclude dust. By the new Martinolich method hulls are sand-washed in a single day, with no dust involved.

With the Martinolich method, after a hull is cleaned to bare metal, acid is applied which absorbs all water and removes small indentations of rust. Then two coats of plastic anti-corrosive are applied with spray guns, eliminating hand brush application. The last coat of either cold or hot plastic paint is also sprayed on. Also installed and operated in connection with the method is equipment for metallizing hulls, machinery and shafts. Used on steel hulls are American Marine cold and hot plastic paints.

"Pacific Pearl" Shellfish Recipes Are Published

A sheet of shellfish recipes particularly applicable to canned crab, oysters and clams, with the recipes arranged so they can be cut out and attached to filing cards, was made available for consumer distribution in December by Ivar Wendt, Central Building, Seattle, exclusive sales agent of "Pacific Pearl" Brands canned seafoods featured in the material.

The folder also includes pictures and text descriptive of Pacific crab fishing and packing operations. It is available to consumers on request, or through dealers.



Harry Brady, owner of the *Ruth K,* San Diego, made a $10,000 equipment investment in his Albacore-Swordfish boat and this investment paid off with a successful Albacore season. The Kettenburg 38 has aboard a Bendix depth recorder, a Radiomarine radiotelephone and an AR8711 Radiomarine direction finder with outside loop, and a Freeman Metal Marine Pilot. She is powered with a "Caterpillar" diesel, D4600 6-cyl., 65-hp. with 3:1 Twin Disc reduction gear. He has his radio phone and direction finder in a tight box topside, with his Bendix depth recorder installed on the port side of the housetop, opposite the radiophone.

136-Ft. Shark Boat

A conversion job at the Martinolich Ship Repair Co., San Francisco, is being done on a former PCS, 136′ long. She has been purchased by the Tuna-Shark Corp., Oakland, Calif., and will be used in the tuna and shark trade. Her name will be *Tuna-Shark.* She is powered with two 500 hp GM Cleveland diesel engines, and she also has GM auxiliaries. Refrigeration and other equipment is being installed.

The Fish & Wildlife Service vessel *Black Douglas* was hauled out at Martinolich's for general repairs as was the *Albacore,* California Division of Fish & Game patrol boat.

Shark Fishing Early

Soupfin shark fishing got underway out of Humboldt Bay early in December, with a fleet working out of Eureka including the 78′ *Frigidland,* Skipper Ras Misund; the *Dorene B,* Neil Burton; the *North;* the *Cleone,* under John Lovdahl; the *Sea Gull,* Paul Pellegrini.

The season opened almost a month earlier than usual, and followed a series of southerly storms.

"GOLDEN MIST"

Fancy White Meat Albacore

TUNA

Albacore is the Aristocrat of the Tunas, and WHIZ "Golden Mist" is Albacore Tuna at its best, packed with the painstaking care and to the high standards required of all WHIZ Fish Products.

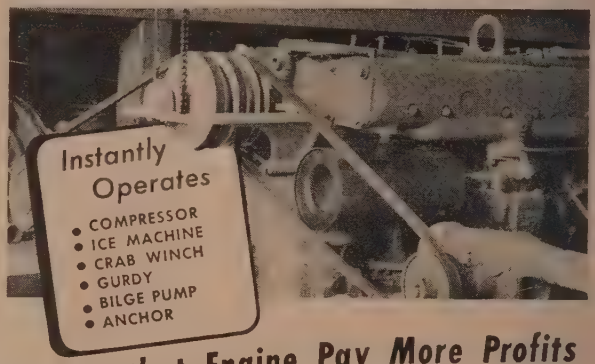
WHIZ also offers you a quality line of fancy canned Salmon and Crab Meat packed under the popular "Golden Mist" label.

WHIZ FISH PRODUCTS COMPANY SEATTLE, WASH.

WHIZ FISH PRODUCTS CO.

Producers and Distributors of Selected Sea Foods
2000 Alaskan Way, Seattle 1, Wash.

ALBINA Utility Power Take-off



Makes that Engine Pay More Profits

You get immediate auxiliary power to increase production on your work boat with... ALBINA'S POWER TAKE-OFF. Unit is chain or lever operated. Adaptable to any marine engine. Outlasts life of engine. Proven in the field.

DIMENSIONS
12⅜" long x 9" wide with 6" diameter sheave.

WEIGHT
Approx. 25 lbs.

Write Factory for FULL DETAILS

ALBINA ENGINE & MACHINE WKS.

2100 N. Albina Ave., Portland, Oregon

PFLUEGER HALIBUT and KIRBY HOOKS

Make Money for Fishermen

They have the construction that withstands hard use. They hold their sharp points and barbs — their tough steel holds heavy fish until safely landed in your boat. Ask your supplier.

The Enterprise Manufacturing Co.
AKRON, OHIO

PFLUEGER

(PRONOUNCED FLEW-GER)

A GREAT NAME IN TACKLE

IF YOU LIVE IN THE WEST...

If you fish, cruise, race, or build boats, PMB is edited for you—for your special use.

P Planned and edited exclusively for Pacific Coast boat owners and operators, PMB shapes boating information to fit Pacific Coast needs.

M Monthly features present the latest developments in equipment and new construction for both pleasure craft and work boats.

B Better cruising, better fishing, better all-round boat operation and appearance are yours with each copy of PACIFIC MOTOR BOAT.

SUBSCRIPTION INCLUDES
ANNUAL PILOT HOUSE HANDBOOK

1 Year—$3.00 2 Years—$4.50
3 Years—$6.00

12c Crab Price Opens S. F. Season

San Francisco crab dealers opened the 1949-50 season by agreeing to pay 12c per lb. for crabs.

The crab season opened Nov. 15 for both Eureka and Monterey. John Pastorino, secretary of IFAWA Local No. 34 sent out patrol boats to see that no pots were put out ahead of time. Two violators had their traps confiscated by the Bureau of Patrol, Division of Fish & Game.

A crab committee was set up by the union consisting of Emile Barbera, Vic Pomilia, Al Sancimino, Carmelo Palania, Vince Mercurio, Tom Passanisi, and Dominic Mattero.

Canning Crab On Cook Inlet

Two small new crab-canning plants are operating on Kachemak Bay, Cook Inlet, using Dungeness crabs which, according to report reaching Seattle, have been quite plentiful there this season.

John Ekren, Jr., and a partner packed in a small way through the fall, finding a local market for quite a bit of their output. Later John Ekren, Sr., and Harley Ekren, of Anchorage, put in an outfit on McDonald Spit, and were just getting started the first of December.

Freezing Mothership Enters Shrimp Trade

The shrimp industry of the Gulf of California is turning to the use of motherships. Recently put to service there for Productos Congelados, Guaymas, headed by Hernando DeCima, was the *Mahoning,* a 115-foot converted naval vessel with a modern sharp-freezing and holding system installed.

Propulsion is from a pair of "Caterpillar" diesels. The refrigeration system by Baker is operated through a pair of 40-kw. General Motors diesel generating sets. Freezers are installed on the main deck, each of which has a capacity of 900 lbs. per hour, achieving a temperature of 50 degrees below zero. Procedure is similar to that of shore plants where de-headed shrimp are arranged in double rows in 5-lb. stainless steel trays, to which 2¼ lbs. of water are added.

Rock wool insulation below deck assures a constant temperature of between 15 to 20 degrees below zero. It is below-deck where the packaged containers of shrimp are stored and held in low temperatures.

Two pictures taken during the autumn Fisheries Festival at Guaymas, when the Blessing of the Fleet marked observance of the opening of the shrimp season. The festival was in charge of S. Perez Ramos of Fomento Maritimo S. A., a shrimp packing company, assisted by Hector Ferreira, another leading factor in the shrimp industry. The festival was attended by Ingeniero Enrique Romay, director general of fisheries of Mexico, as well as the Minister of the Navy, the governor of Sonora and the bishop of Sonora. The large vessel on the right in the upper photo is *Francisco Villa,* which Sr. Ramos' Fomento Maritimo operates as a freezing mothership for shrimp trawlers and a refrigerated carrier for transporting the frozen shrimp from the fishing grounds to shipping point. The lower photo shows a number of shrimp vessels in the harbor at Guaymas.

New Mexican Shrimp Firm Buying Boats

Evidence of the rapidly-growing Mexican shrimp industry in the Gulf of California is shown in the formation of another concern which, last month was gathering a fleet of trawlers and plans to build a sharp-freezer at Mazatlan. New concern is known as Pesquera de Mazatlan, S.A. Principals are Isaac Serge and George Corppel, Felipe Ceballas and Hermando Urrea.

Four Southern California vessels were purchased in November: 72′ seiner *Buccaneer,* from Alex Lapov, San Pedro; 70′ former tender *California II,* from French Sardine Company; 60′ seiner *Sunrise,* San Pedro; and 60′ former dragger *Buddy,* located at San Diego. All were converted to trawlers.

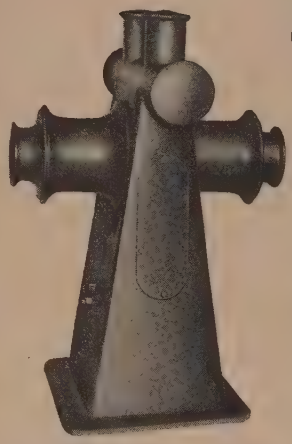
Until the company's new freezer is constructed—this will have a daily capacity of 25,000 lbs. — shrimp brought to Mazatlan will be processed for shipment at a freezer established there by Refrigerdora del Noroeste, S.A., several years ago, built and equipment installed by Ralph E. Manns Company, Wilmington.

Astoria Trawl Union Accepts Lower Prices

Astorai Otter Trawlers Union, Nov. 15, voted to accept reduced prices for bottom fish, as submitted by the Offshore Fishing Vessel Owners Association as being the minimum prices at which the boat owners could operate profitably. Drag fishing has been practically stalemated this fall, with only Dover and Arrow-Tooth sole being taken at 3c. The new prices submitted were: Dover, Arrow Tooth, Black Rock, English Sole, Flounder, and Rex Sole 10″ and over, all at 3c; Red Rockfish, 3½c; Petrale and dressed Ling Cod, 5c; and large dressed Sablefish, 8c. Mink Feed price remained at 2½c. The proposed prices had not yet been accepted by the packers and Ben B. Ferguson, secretary of the Otter Trawlers Union, stated that on the basis of the prices voted on and accepted, the boats would have to be allowed to fish on an unlimited basis for all species.

DICK BORCH, at one time with Seaboard Fish Company, is now fish buyer for S. Einstoss in Ketchikan.

NORTHERN LINE SEINER Type 1-B



Again we have responded to the demands of Fishermen everywhere for a small, economical Seine Winch, of simple, rugged design to fit the modest Budget.

Specifications:

- Full height—all steel hot dipped galvanized after fabrication.
- Light weight — strong—no sharp corners.
- Special length aft for extra wraparound . . . Gypsies cast iron.
- Breast line gypsies fore and aft detachable cast steel.
- Built in ratchet dog can be foot operated from either side — heavy roller chain drive with built-in chain tightener.

DESIGNED FOR SEINERS
From 48-65 Feet in Length.

Phone, Wire or Write

TACOMA BOATBUILDING CO., INC.
DESIGNERS • BUILDERS
WOOD AND STEEL CONSTRUCTION
Manufacturers and Designers of the
"NORTHERN LINE" Auxiliary & Deck Equipment
2142 East D Street Main 8138 Tacoma, Washington
ARNE STROM — HALDOR DAHL

"SEA HAVEN"
Fancy Dungeness Crab Meat

Tops in Quality

Other "Sea Haven" Products Include: Fresh and Frozen Whole Shell Crabs, Fresh and Frozen Crabmeat, Albacore Tuna, Salmon, Smoked Oysters, Crab Legmeat and Smoked Crablegs.

KAAKINEN FISH COMPANY
and PORT ORFORD FISH COMPANY
Westport, Wash.
Tel. 2781-2783
Canneries at
Westport, Washington
Port Orford, Oregon

PACIFIC FISHERMAN'S READERS ARE BUYERS!

You want buyers, and PACIFIC FISHERMAN'S readers are buyers. They are the fishermen, the fish boat owners and operators, the cannery owners, the plant operators and the marketers of fisheries products. Your product may find a new or larger outlet in this market. It's active, it's profitable, don't overlook it.

Advertising Rates Upon Request

PACIFIC FISHERMAN
71 Columbia St. Seattle 4, Wash.

Alaska Board O.Ks. Troll Salmon Limits

Troll salmon season for Alaskan waters to bring practice into line with that of the Pacific States, but at the same time retaining special provisions to meet Alaskan conditions, was recommended to the U.S. Fish and Wildlife Service by the Alaska Department of Fisheries following the November meeting of the Alaska Fisheries Board.

The Alaska proposals submitted to FAWS would fix no minimum size limit for Silver salmon, and would permit winter trolling in "inside" waters where this has been practised in the past.

The Board strongly objected to the FAWS regulations fixing a 26″ minimum size limit for Chinook salmon caught by trolling, but permitting the taking of salmon of this size by other forms of gear. It approved the minimum size limit as a conservation measure, but felt that taking of salmon of this size by other means should be prohibited; and that possession of under-sized salmon should be declared proof of their illegal capture.

JOHN MILLS, owner of the Ketchikan trolling boat *Alaskan*, left recently for a vacation trip in the states. He was accompanied by *MRS. MILLS*.

"Brooks Bay" Powered With New "Cat" Diesel

Canadian Fishing Company's 72' vessel the *Brooks Bay* is the first B.C. boat to be powered with one of the new series "Caterpillar" diesel marine engines. The new *Brooks Bay* power, a "Caterpillar" Diesel D364 is one of a new series (up to 400 H.P.) now in production.

With a maximum output of 266-hp., a rated output of 234-hp. and a continuous output of 215-hp., this new "Caterpillar" engine is of the 8 cylinder V type with a 5 ¾″ bore and an 8″ stroke with a piston displacement of 1622 cubic inches.

An important feature which will prove of value to the *Brooks Bay*, which regularly fishes Area 3, is the new large capacity oil system which allows long periods between oil changes. The vessel is fitted with a Twin Disc reverse and reduction gear, featuring built in manually controlled variable slip fluid coupling, a built in rear power take off, combined hydraulic clutch control and force feed lubrication, eliminating all manual greasing.

Built in 1944 by the Port Albion Shipyards, the *Brooks Bay* is 72' by 19'3″ by 9'1″ and is used extensively as a halibut boat and packer. Under Skippers Tommy Hovden and Jimmy Guthro the *Brooks Bay* has earned the reputation as the best all around producer and packer in Canadian Fishing Company's fleet.

Installing a new D-364 "Caterpillar" diesel in the Canadian Fishing Co.'s famous vessel *Brooks Bay*. This is the first engine of this new series installed in a British Columbia vessel.

Moonbeam, the former small tuna vessel *Brisky*, has been sold to *FRANK ZUNIGA* and her registry changed to Mexican. She is now located at Ensenada, Lower California.

A reliable and conscientious contact in the fishing trade

KNOWN FOR QUALITY FROM COAST TO COAST

FRESH • FROZEN • CANNED

IVAR WENDT
EXCLUSIVE SALES AGENTS
701 CENTRAL BLDG.—SEATTLE 4, WASHINGTON
TELEPHONE ELliot 1272 • TELETYPE SE-673

PACIFIC PEARL CRAB - SALMON - TUNA - CLAMS - OYSTERS

Easy Way to Remove Rust from Equipment

WHERE equipment, from long disuse or exposure, has acquired a coat of rust, recondition it by using Oakite Compound No. 32. This scientifically designed inhibited acidic type cleaner quickly dissolves rust without harming the sound basis metal. Method eliminates arduous manual cleaning. Dangers usually associated with the use of raw acids are eliminated.

Step-by-step details on derusting — plus 43 other cleaning chores — yours free in the Oakite "44' Digest. Get yourself a copy.

OAKITE PRODUCTS, INC.
1001 E. First St., Los Angeles 12, Cal.
95 Market St., Oakland 4, Cal.
Technical Service Representatives and stocks located at San Diego, Sacramento, Seattle, San Francisco, Portland and Spokane. Consult your local telephone directory.

OAKITE
REG. U.S. PAT. OFF.

Specialized Industrial Cleaning
MATERIALS • METHODS • SERVICE

HAMMER MILLS

VERTICAL TYPE

ANY SIZE — ANY H.P. *We Can Save you money!*

Large Capacity • Minimum Floor Space • Easy Maintenance

- The illustration is that of our 8"- 12"- 18" Mills
- May be equipped with screw conveyor attachment of your choice at no extra charge
- For human consumption processing all steel contact points are substituted with stainless steel

Makers of complete reduction equipment and machinery.

P & L WELDING & MACHINE WORKS

519 East LaPalma St.
ANAHEIM, CALIF.
Phone: Anaheim 4311

Get the facts

about Ship Telephone Service from this free booklet

Find out how you can enjoy radiotelephone service on your craft. This free booklet gives full information on the ship-to-ship . . . ship-to-shore facilities that mean less worry, extra freedom, to all who sail the seas. Call or write a Pacific Telephone Business Office in the nearest principal port city.

Keep in touch . . . use Ship Telephone Service

The *Pacific Telephone* and *Telegraph Company*

"CATERPILLAR" and PACKARD
THANKS, MR. BOAT OWNER
for our successful first year as distributor of Caterpillar and Packard marine engines in Western Washington
AND HAPPY NEW YEAR TO YOU!
Sales & Service for WESTERN WASHINGTON & ALASKA Fishermen
N. C. MARINE
SEATTLE – 2500 Westlake North AL. 6340
ALASKA – NCCo Juneau Marine Base Ketchikan – Anchorage – Nome

THE KELVIN-WHITE "CONSTELLATION"

HAS THE

GIMBAL RING INSIDE

Write for descriptive circular

that

- Guarantees the maximum in performance and readability!
- Keeps the compass card level and the lubberlines vertical, no matter how far or fast the roll and pitch as the 45° roll position of the picture shows.
- Lets you use a smaller, less expensive, binnacle.
- Adaptable to most binnacles now in use.
- Now available in 5", 6", 7" and 8" sizes.

KELVIN-WHITE CO.

4000 EAST ANAHEIM ST., LONG BEACH, CAL.

BOSTON 90 State St. | NEW YORK 38 Water St. | BALTIMORE 406 Water St.

Whenever a seafood is called for there's a Columbia River Packers Association label and variety to fill the demands. For instance . . .

BUMBLE BEE BRAND

Columbia River Packers Association, Inc., Astoria, Oregon

- Fancy Columbia River Chinook Salmon
- Fancy Red Alaska Sockeye Salmon
- Fancy Smoked Fillet of Shad
- Fancy Kippered Sturgeon
- Fancy Smoked Sable Fish
- Fancy Oregon Crab Meat
- Fancy White Meat Tuna
- Fancy Solid Pack Tuna
- Fancy Blueback Salmon
- Fancy Shad Roe

LINES and LEADERS

Marine Products Pump Line All New, All Modern

In introducing its 1950 line of pumps, Marine Products Company, Detroit 14, pronounces it not only the most complete line of marine pumps on the market, but points out that every pump has been engineered since the war by men who have spent a lifetime in the marine field.

Marine Products pumps are standard equipment on several of the leading makes of marine engines, and the line includes replacement models for nearly every size and model of marine engine on the market.

The new MP line of "Engine Cooling Pumps" are available in 10 models for all engines up to 200 hp. These pumps feature the revolutionary DuPont Neoprene impeller, sole moving part, which it is claimed withstands almost unlimited wear, even when pumping sand and silt.

Marine Products Company also makes bilge pumps in more than 30 models, including all sizes and rotations. These pumps are equipped with an all-bronze, non-clogging impeller, which handles not only a large volume of water, but semi-solids and small debris besides.

The most recent addition is a series of small compact electric motorized Bait Tank Pumps in 6, 12, 32 and 110-volt dc and ac, and also a complete line of heavy duty, all bronze, Twin Disc clutch, belt-driven centrifugal pumps.

MP Company is rounding out its organization to include representation in every marine and industrial trading center in the country. Sales are entirely through distributors and dealers. Franchises are still available in some domestic trading areas, as well as a few foreign countries. For full details, write Marine Products Company, 515 Lycaste, Detroit 14, Michigan.

Lathrop 53-Year-Old Line Filled By 100-Hp. Diesel

The Lathrop Engine Company is a manufacturer of marine engines that can boast a record of 53 years of continuous operation. Today, twenty-one Lathrops —gasoline and diesel—are turned out from the plant in Mystic, Connecticut, located on the same property where the famous Lathrop two-cycle "make and break" engines were perfected at the turn of the century. Lathrops are exclusively marine engines featuring four-cycle operations.

Lathrop gasoline engines are divided into three classifications—*heavy-duty, medium-duty,* and *light-weight, high-speed.* The line starts at a competitive price level and the power range extends from 21 to 175 hp.

Lathrop diesel engines have won their greatest acceptance in work boat service, particularly among fishing boat operators. By spring of 1950, when the new 100 hp. model will be available for delivery, the line will include six power models, 50, 60, 80, 90, 100 and 187 hp. This newest engine, the D-100, is designed to accommodate the very latest types of reverse and reduction gears, large-sized 32-volt output generators and auxiliary drives.

Capt. R. M. Ellis, Royal Navy (Ret.), British factory representative in the United States and Canada for the Lister and Blackstone group of companies. During the war he commanded the cruiser *Suffolk* in the action which destroyed the German battleship *Bismark,* and later the battleships *Queen Elizabeth* and *Howe.* He was director of British Combined Operations during the period of the Allied landings in Africa, Italy and France. Now retired, he is representing Lister-Blackstone diesel engine in this country.

Fairbanks-Morse Promotes J. A. Cuneo, A. M. McLaren

Several changes in their sales organization have recently been announced by Fairbanks, Morse & Co., manufacturers, Chicago, Illinois. These are as follows:

J. A. Cuneo, formerly branch manager, Los Angeles, Calif., has been transferred to Chicago to assume the duties of manager of the company's Chicago branch. A. M. McLaren succeeds him as Los Angeles branch manager.

New Hydraulic-Actuated Gear Featured By Snow-Nabstedt

The Snow-Nabstedt Gear Corporation of Hamden, Connecticut, is showing this winter for the first time its new hydraulically-actuated reverse gear model No. 3757. This gear has been developed and released for production after a series of very severe laboratory and engine tests.

The No. 3757 gear is fully enclosed and will fit the flywheel and flywheel housing to replace its well-known predecessor, model No. 3755, manually-operated gear.

The pump for pressure and lubrication is incorporated in the reverse gear and provides sufficient oil for quick operation and lubrication even at low idling speeds. In fact, shifting from full speed ahead to full speed astern can be done within one and one-half seconds at these low speeds. At high speeds emergency shifting can be done in one second or less.

The simplicity of design is appealing strongly to all engine manufacturers as all oil passages are large, short and direct. All long-distance piping and passages have been eliminated.

Safety locking device is provided if the pressure fails, and the forward clutch may be so locked within a few minutes.

This gear may be equipped with a full line of reduction gears from 1:1 up to 4.4:1 without disturbing the alignment between the reverse gear and the engine flywheel; also, reductions turning either port or starboard at full speed and full power are equally available.

The famous S-N principle of design; namely, to drive directly into the reduction, by-passing the complete reversing mechanism has been maintained, and, as a result, the gearing and bearings take no wear and tear during the long periods of forward driving operation.

Snow-Nabstedt distributors on the Pacific Coast are Pacific Marine Engine Company, Seattle; Simplex Engine & Mfg. Co., Vancouver. B. C.; Oregon Marine Supply Co., Portland and Astoria, Oregon; Star Marine Engine Works, Oakland; Fellows & Stewart, Inc., Terminal Island, California; and Crofton Diesel Engine Co , San Diego.

The new Los Angeles headquarters for Fairbanks, Morse & Co., located at 4535 South Soto Stree coincidental with the occupation of the new plant was the appointment of Harvey Heil as diesel ma Los Angeles, according to an announcement by John A. Cuneo, branch manager of the firm. Heil rep Stevens, who has taken up a new assignment with the company in the East. For more than 20 years has been connected with Fairbanks, Morse at St. Louis and Boston, and he brings to the aggr Angeles organization with its all-modern facilities, a varied experience which has brought him in co practically every known application of diesel power. This experience qualifies Heil to render the best in engineering diesel installations, both marine and stationary.

NEW ENGLAND FISH CO.

PRODUCERS – PACKERS – DISTRIBUTORS

SINCE NEFCO Fishery PRODUCTS 1868

FROM THE GULF OF ALASKA TO CALIFORNIA

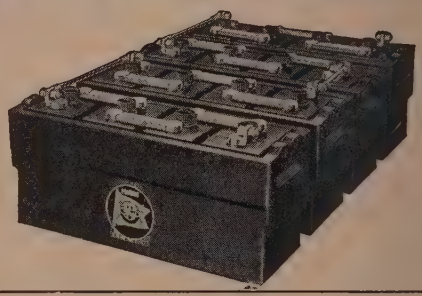
FRESH FROZEN SMOKED **FISH** CANNED MILD CURED SALMON

"PACKED WITH THE WIGGLE IN ITS TAIL"

SEATTLE - WASH.

DISTRIBUTORS

Willard Marine Batteries



Next time you need batteries, remember that you pay no more for Willards. And their longer life and freedom from trouble makes *Willards cost less per year to own!*

FREMONT ELECTRIC CO.

Power and Light for Marine and Stationary Installations

744 N. 34th St., EV 2323 MAIN STORE — SEATTLE — 132 Spokane St., SE 7984 SOUTH END STORE

EVERY BOAT A QUEEN

SEA ROSE

70'x19' 6"x8' 6"

JOHN ZOROVICH
Skipper

Fishing for own account. Powered with a 500 - hp General Motors Diesel.

Kazulin-Cole Shipbuilding Corp.

P. O. Box 862 Phone MAin 6379 TACOMA

Fishing Boats • Skiffs • All types of boat repair

"THE HOUSE OF FRIENDLY SERVICE"

NORDBY SUPPLY COMPANY

To All Our Friends Both Far and Near . . .

Friendly Best Wishes
For a Successful New Year!

NORDBY'S—the House of Friendly Service
Serving Every Fishing Need

1300 WESTERN AVE., EL. 1364 SEATTLE 1, WASHINGTON

WATER STREET KETCHIKAN, ALASKA

LET US TELL *your* FISH STORY

With phone in hand we tip off our contact men . . . Presto! Across the nation your story is told!

STAMM-SCHULMAN & CO. are specialists in food sales—fresh and frozen fish and seafoods, canned goods, etc. Strategically located with direct contacts throughout the country. Concentration on most profitable markets. Consistent record for making sales at highest prices.

LET US TELL IT — Write, wire or phone today—so we can begin handling your food products.

STAMM-SCHULMAN & CO.

• INTERNATIONAL FOOD BROKERS •

343 S. Dearborn St., Phone HARrison 3787, Chicago 4, Ill.

234 Front Street New York City — Kilmarnock Virginia

The Complete Book of

COMMERCIAL FISHING

on the Pacific Coast

OCEAN HARVEST, by Carl I. Wick, tells the things you want to know about fish species, fishing methods, boats and gear, trade customs, history of the industry. Written by a commercial fisherman who is also a scientist. Photographs and diagrams, 185 pages, Superior Publishing Co. Order direct from **Pacific Fisherman,** 71 Columbia Street, Seattle 4, Washington. $3.50 postpaid.

New Food Sanitation Booklet

An illustrated 32-page booklet providing helpful data on how to simplify cleaning and sanitizing operations in food plants has recently been published by Oakite Products, Inc., New York.

This new booklet offers a thoroughgoing account of improved cleaning methods, germicidal techniques, descaling procedures and related practices that effect important economies in connection with food plant sanitation programs. Among the specialized materials specifically discussed in the booklet are the following: alkaline and acidic cleaners; quaternary ammonium and chlorine sanitizers; deodorants; bottle and case conveyor chain lubricants; water softeners; rust preventives; rust and scale removers; and paint-stripping materials. Also presented in the booklet are valuable recommendations on materials and procedures that make possible substantial time and work-savings in the performance of such general plant cleaning tasks as: air control equipment maintenance; steam and power generation equipment cleaning; steam-detergent cleaning of large processing and handling equipment; floor cleaning; lavatory sanitation; and truck fleet maintenance.

Industry personnel desiring free copies of this new sanitation guide may obtain them by addressing Oakite Products, Inc., 1001 E. First Street, Los Angeles 12, California.

Standard of California Launches New Heavy-Duty Lube Products

Standard Oil Company of California launched a new series of diesel and heavy-duty gasoline engine lubricants in November after two weeks of intensive indoctrination which brought 400 members of its marketing staffs together for meetings held at San Francisco, Los Angeles and Seattle.

These representatives from Alaska and the seven western states, saw and heard the inside story of Standard's new RPM DELO "family" of oils. Introduction of the new series was described as the most important improvement in performance and quality since 1935, when Standard brought out the first compounded diesel lubes.

They heard "The Delo Story" from R. W. Goodale, Standard's lubricant division manager, and from the company's technical men who developed this new line of products to meet today's more stringent operating conditions. These were described as heavier loads, higher horsepower engines, higher operating temperatures, and more severe lubrication requirements.

The new DELO line, Standard's men were told, has been developed after three years of concentrated research and expenditure of about $3,000,000 to meet these tougher post-war conditions.

Sangster Handles Nordberg Gas Engines in B. C.

Charles G. Cox, Pacific Coast manager, Nordberg Manufacturing Co., San Francisco, has announced that the Cliff Sangster Co., 1779 West Georgia St., Vancouver, B. C., has been appointed distributor of the Nordberg marine gas engine for British Columbia.

The Sangster company offers complete facilities for sales, installation, service, and parts of Nordberg gasoline marine engines.

BLADELESS FISH PUMP FEATURED

R. H. Morse, Jr., Fairbanks-Morse vice president in charge of all operations (left) and R. C. Glazebrook (right), inventor, designer of the new Fairbanks-Morse bladeless pump. These two gentlemen are holding a shop coat and pants which have passed through the pump without clogging it.

New Bladeless Fish Pump Is Practically Clog-Free

A new type pump capable of handling fish without damage by incorporating a feature heretofore considered an engineering impossibility, was announced recently by Fairbanks, Morse & Co., manufacturers, Chicago, Illinois.

This new pump is different from all others in that its impeller is bladeless, having no vanes or blades. Instead, the fluid passes through the impeller through a single rotating channel or passageway with the centrifugal force doing the work.

Wound somewhat like a corkscrew, this curved channel starts at a small radius at the axis of rotation and then fans outward in a helical path. Thus centrifugal action throws the fluid against the sides of the bent channel or passageway and because these slant forward, the fluid carrying the solids and trash is driven along the channel. This is what achieves the pumping action. The diameter of the rotating channel at its narrowest point is equal to the diameter of the inlet pipe; hence almost anything that will enter the eye of the pump will be carried through without clogging.

The advantages of this remarkable new pump are many, according to company officials. In actual tests before several hundred consulting engineers at the company's Beloit Works recently, this new pump handled solids 10 to 25 times larger than that handled by other pumps of the conventional type. Being virtually clog free, the pump will require less attention in actual operation and less maintenance, thereby effecting considerable dollar savings.

At the plant demonstration four pumps stood in a row: one of the new bladeless type and three of the conventional design. Through a hopper leading to the pumping mechanism of each, various materials were dropped into the water flowing through the impellers of each pump. Tennis balls passed through each impeller in a flash. Small strips of canvas likewise passed through each pump without much trouble. Then, as the strips of canvas became slightly larger, the conventional type of trash pumps began to show difficulty in handling the material. They were turned off when they were choked on small pieces of canvas, handkerchiefs and diapers.

Then, to show the gentle pumping action achieved by the bladeless impeller, crates of oranges, apples, and even hard boiled eggs, were poured into the hopper and passed through the bladeless pump. The hard boiled eggs came through whole and in most cases not even the shells were cracked. Finally, to show the unusual ability of this pump to handle solids of all kinds, one of the technicians in the laboratory peeled off his coat and it was sent on a speedy trip through the pump. And lastly, a pair of overalls were dumped into the hopper and came out almost immediately.

Fibreboard Products Makes Personnel Changes in S. F.

N. M. Brisbois, vice-president in charge of production, Fibreboard Products Inc., is retiring under Fibreboard's retirement program, according to an announcement by T. N. Bland, vice-president and general manager of the company, and is being succeeded by Robert E. Bundy, formerly general manager of operations for all Fibreboard mills and converting plants.

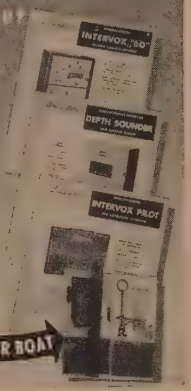
Mr. Bundy has been elected vice-president in charge of production. His former position has been filled by the appointment of Mark E. Sanford, who moves up from the resident managership of one of Fibreboard's mills at Antioch, Calif.

Another change in top-flight personnel announced by Mr. Bland is the appointment of B. P. Altick, presently manager of Federal Container Co., Philadelphia, a wholly owned Fibreboard subsidiary, to be assistant to Mr. Bland. Mr. Altick will return to San Francisco Dec. 11.

TO HELP YOU COMPARE SPECIFICATIONS AND VALUE

Intervox

RADIOTELEPHONES
DIRECTION FINDERS
AUTOMATIC PILOTS
DEPTH SOUNDERS



Check on performance, price and service before you choose. For illustrated bulletin, specifications and nearest dealer's name, clip this ad and mail to Intervox Corp., 2701 Calif. Ave., Seattle 6, Wash. (WEst 0660)

FREE BULLETIN SHOWS MODELS AND PRICES FOR YOUR BOAT

VITA FOOD

TRADE MARK

PRODUCTS, INC.

GENERAL OFFICES — NEW YORK CITY

Importers & Exporters — Producers, Packers, Smokers

FISH OF ALL KINDS

Mildcured and Frozen from all Principal Centers of Alaska

SEATTLE OFFICE—BELL ST. TERMINAL, SEATTLE 1

AHOY!

You Can Do the Job Better with

STAY-TITE MARINE PRODUCTS

★ STAY-TITE CAULKING COMPOUND — greater coverage per pound. Mahogany, gray, or black.
★ STAY-TITE WATERPROOF GLUE —not affected by moisture.
★ STAY-TITE SEALER—stops leaks in deck seams. Remains pliable.
★ STAY-TITE WOOD CRACK FILLER—for floors, walls, tile, etc.
★ STAY-TITE XXX CEMENT — for laying linoleum, felt, canvas, etc.
★ STAY-TITE WOOD PRESERVATIVE — prevents dry rot and growths.
★ STAY-TITE MILDEW PROOFING—stops mildew and fungus.
★ STAY-TITE WATERPROOFING for Canvas and Fabrics.
★ RUSTGO—Rust Remover.

Your Marine Supply Dealer Carries Stay-Tite Products— or Can Get Them for You — See Him Now

STAY-TITE PRODUCTS CO., Dept. PF, 3107 Detroit Ave., Cleveland 13, O.

ALWAYS QUALITY DEPENDABLE

OXENBERG BROS.

SMOKED FISH PRODUCTS

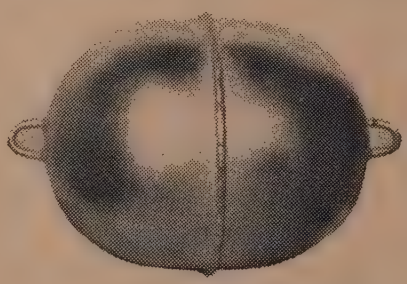
Receivers and Distributors of
ALL KINDS OF FISH FOR SMOKING AND CURING
PACKERS MILD CURED AND FROZEN SALMON

GENERAL OFFICES, FACTORY & COLD STORAGE
276-280 METROPOLITAN AVE., BROOKLYN, N.Y.

Plants and Branches
SEATTLE, WASHINGTON
Alaska, Canada, England

SPECIALISTS
in the marketing and sales promotion of canned fish and sea foods

L. H. FROHMAN & SONS • Sales Agents
FOR CANNERS AND PACKERS OF FOODS
510 N. DEARBORN STREET CHICAGO 10



Steel Fishing Floats
8"x10"

Tested to 125 fathoms in actual operation by Fishing Boat "Dacota"
CADMIUM PLATED OR PAINTED
Price on request.

NORTHWEST IRON WORKS
P.O. Box 642 BELLINGHAM, WASH. Tel. 5282

SALT

That Has Stood the Test for Over 45 Years

All Grades — High Quality — Fair Prices

Long Beach Salt Co.

2476 Hunter Street, Los Angeles 21, Calif.

PROMPT SERVICE BY TRUCK OR RAIL

PHONE: TUcker 1424

CONSTRUCTION WORLD

A monthly journal covering all developments in the Engineering and Construction fields of Western Canada, Alaska and the Western States.

SUBSCRIPTION PRICE PER ANNUM, $3
OR $6 FOR THREE YEARS

9th floor Royal Bank Bldg. VANCOUVER, B. C.

Nylon Fishing Rope Featured In Columbian Booklet

Columbian nylon rope, its characteristics and its advantages, is described generally in a folder newly published by Columbian Rope Co., which announces that nylon rope is fast becoming more popular with fishermen everywhere. Long life; resistance to abrasion —water absorption—marine rot or decay; make it adaptable for use as part of the fishing equipment or as lines aboard ship. For hawsers and other lines, it is unsurpassed. Nylon lines are easy to handle, absorb little moisture, and can be stowed without drying.

Recent experiments conducted by Columbian show that nylon for use in fishing nets really pays off in long life, ease of handling and durability. For cod-end use, nylon can really take it. It will outwear manila, sisal or cotton cod-ends by many, many trips.

Columbian nylon heading twine is another Columbian nylon product superior in texture and performance. It withstands the ravages of salt water, marine organisms, and shows great resistance to the attack of lobsters, etc. It does not tighten up and pull staples or break.

Columbian's complete line of nylon fishing cordage is available in two constructions. Both are made from the same pure virgin nylon.

1. Columbian filament nylon, made from long continuous filaments of original, white, silky nylon, is tops for appearance, texture, and strength.

2. Columbian spun nylon is less slippery when wet and holds knots and splices more securely. Eighty-five per cent as strong as filament nylon, this far exceeds the strength in other vegetable fibre cordage.

More complete information on any particular nylon fishing rope may be had from the Columbian Rope Company, Auburn, New York.

Trouble Light Has Permanent Magnet

The "Henco Magnalume 300" is something different in a "self supporting" trouble light. The Alnico V magnet, molded right into the case, is a deep-flux type. This means that it holds through thick paint and grease, with an approximate 17-pound grip. All construction is the finest, with enclosed switch, 25-foot cord, and Neoprene rubber is used throughout to prevent deterioration in oil and grease. More information may be had from the C. J. Hendry Co., 27 Main Street, Dept. AX, San Francisco.

ROBERT K. HOOD

Dick M. Landis, who has been associated with the DeLaval Pacific Co. in San Francisco since 1937, and for the past several years as manager of sales, industrial department, has been promoted to the position of assistant manager, industrial division, DeLaval Separator Co., with headquarters in New York City. Taking Mr. Landis' place as manager of sales, industrial department, DeLaval Pacific Co., San Francisco, is Robert K. Hood. Mr. Hood has been associated with DeLaval for a number of years since the war, and has been sales engineer for the company in northern California.

H. E. BURKE, secretary of the Western Fisheries Co., Parks Canning Co. and related concerns, Seattle, suffered minor injuries and had his car wrecked in an auto collision in mid-November near Bakersfield, Calif., on his way home from a vacation trip east.

Closing Machines for Sale

1 **Oval Can Closing Machine** for one-pound oval cans. Max. Ams., Model No. 32-B, American Can Conversion, capacity 35 cans per minute, a good buy, in good condition.

1 **Continental-Troyer-Fox Model No. 8-DS for No. 10 Cans,** with Curler Clincher and Seamer on one base, capacity 45 to 60 cans per minute. Will rebuild. An excellent buy.

Canning Machinery Company
4525 S.W. Lee St. Portland 19, Ore.

Three New Cummins Diesels Featured This Winter

Three new high-horsepower, high-speed diesel engines are being featured by the Cummins Engine Company, Inc., Columbus, Ind. These include the new NVHS-1200 Cummins diesel, a four-cycle, 12-cylinder, V-type, supercharged engine that has a maximum rating of 550 hp. turning at 2100 rpm.

Another featured Cummins diesel is the NVHMR-1200, an unsupercharged marine model corresponding to the basic engine shown in the cutaway version, with rating of 264 hp. at 1800 rpm. in continuous, heavy-duty service, and a maximum rating of 400 hp. at 2100 rpm. This V-type, 12-cylinder engine will be equipped with a 3:1 Capitol marine reverse and reduction gear and Fawick air front power take-off clutch.

The third featured Cummins diesel is model NHRMS-600, a supercharged marine engine with a rating of 188 hp. at 1800 rpm. in continuous, heavy-duty service, and a maximum rating of 300 hp. at 2100 rpm. This engine will be equipped with a 3:1 Twin Disc marine reverse and reduction gear and Twin Disc front power take-off.

All three engines will be equipped with the completely new Cummins "DD" fuel pump.

Sta-Nu-Tral Clutch Has Advantages For Fishermen

The Sta-Nu-Tral Clutch, Nordberg Manufacturing Company's recent development for the Nordberg gasoline marine engine, solves the problem of keeping the propeller dead still in the water when the clutch is in neutral, no matter how fast the engine may be running to drive the integral front flywheel mounted clutch power-take-off or pulleys. Engine temperature does not affect the Sta-Nu-Tral Clutch for its same advantages exist throughout the whole range of engine temperatures. The Sta-Nu-Tral Clutch is interchangeable with clutches supplied in previous Nordberg Gasoline Marine Engines and it is possible to quickly convert these engines now in service to the Sta-Nu-Tral clutch feature through the use of a service replacement kit which is available at nominal cost.

With the Sta - Nu - Tral Clutch, commercial fishermen now have no fear of fouling their propellers with nets or lines when the wind blows their boats into their nets while they are using the front clutch power take-off or pulleys to raise or lower the nets.

LETSON-BURPEE
WEIGHING MACHINES

Accurate to a fraction, and almost human in its performance, the LETSON-BURPEE Can Weighing Machine safeguards your pack and protects profits by automatically rejecting both underweight and overweight cans.

- **RENNIE SALMON SCRUBBERS**
- **LETSON-BURPEE CAN WASHERS**
- **LETSON-BURPEE SALTING MACHINES**

Exclusive U. S. A. Distributors

F. A. GOSSE COMPANY
"Purveyors to the Epicurean World"
1800 EXCHANGE BUILDING MA. 0475 SEATTLE 4, WASH.

THE ALASKA LINE

First
In Serving
Alaska's
Greatest
Industry

ALASKA STEAMSHIP COMPANY
Pier 42
Seattle 4

COMPLETE STOCK OF
Commercial Fishing Supplies
ADAMS NETTING
Make Our Store Your Headquarters While in San Pedro
SEASIDE
SUPPLY STORES, Inc.
803 S. Palos Verdes Street
San Pedro, California
Phones: Terminal 2-1570 and 2-1571

Home of
WONDER
SEA FOODS
★Fresh ★Frozen ★Canned
LARGEST SHIPPERS ON THE PACIFIC COAST
50 Years Quality Packers
HAINES OYSTER COMPANY
Pier 47, Foot of Jackson St.
Seattle 4, Washington
Plants: BAY CENTER, POULSBO, SHELTON
BLYN, ALLYN, BLANCHARD

SITKA
COLD STORAGE CO.
SITKA, ALASKA
BAIT and ICE
FISH STORAGE *and* FREEZING
GROCERIES — MEATS
FISHERMEN'S SUPPLIES

PETERSBURG
Cold Storage Co., Inc.
PETERSBURG, ALASKA
• Commercial •
FREEZING and STORAGE
Excellent Facilities for Buyers and Fishing Boats
BAIT • ICE

Serve
WILLAPOINT OYSTERS
ONCE A WEEK FOR
INCREASED ENERGY
AND
INTEREST IN LIFE

H. C. HANSON
Naval Architect + Engineer
Phone ELiot 3549
102 Colman Ferry Terminal Seattle 4

Mild Cured and Frozen SALMON
ARB
Brand
Packed at Cape Pole, Alaska
P. O. Address: Wrangell, Alaska
Selling Agents:
Northern Products Corporation
200 Bell St. Dock, SEATTLE 1, WASH.

The Campbell Machine Co.
SAN DIEGO 12, CALIF.
BOAT BLDG. MACHINERY REP'S.
ANCHOR and CARGO WINCHES
Distributors
"Union" Diesel Engines

See KOLSTRAND'S for
Trolling Gurdies—Anchor Winches
General Machine Work
Installations
KOLSTRAND MANUFACTURING CO.
4739 Ballard Ave. SU. 7547 Seattle 7

San Diego Marine Const. Co.
SHIP CONSTRUCTION
and REPAIRS
Marine Railways, Floating Drydock
Foot of Sampson St.
SAN DIEGO 12 CALIFORNIA

EDWIN MONK
Naval Architects
Edwin Monk Lorne Garden
Marina Mart, 1500 Westlake North
SEATTLE 9 GArfield 7907

A. D'Acquisto Fish Products
FROZEN SQUID
BOAT TO FREEZER—NO DELAY
SHIP ANYWHERE
Post Office Box 670, Monterey, California
Phone 4181

L. S. BAIER & ASSOCIATES
Marine Designers & Engineers
Patent Owners & Licensers
BAIER SYSTEM of Longitudinal Framing
507 Mead Building Portland 4, Ore.
ATwater 2445

American Hammered Piston Rings
Briggs Oil Filters
Lathrop Marine Engines
H. G. McLaughlin Co., Inc.
76 YESLER WAY SEATTLE 4

Harbor Boat Building Co.
1000-TON DRYDOCK
MARINE WAYS
REPAIRS—COMPLETE SHOPS
24-Hour Service
Terminal Island California

AL LARSON BOAT SHOP
SAN PEDRO, CALIF.
Naval Architects and Boat Builders
Specializing in Commercial Fishing Boats
General Machine and Repair Work

AKERVICK BROS.
TROLLING EQUIPMENT
Trolling Gurdies — Anchor Hoists — Engine Installations, Repair and Overhaul — General Machine Work
Akervick Bros. Machine Works
Salmon Bay Terminal, Seattle 99 ALder 0074

WILDERS & DE FEUER
Naval Architects
Marine Surveyors
1225½ Leland St., San Pedro, Calif.
Terminal 2-1514
551 Spreckels Building, San Diego, Calif.
Phone: Franklin 9-8686

G. BRUCE NEWBY
Consulting Naval Architect
and
Marine Engineer
Telephone 366-35 4549 East Anaheim St.
Long Beach 4, California

Chris-Craft Marine Engine Line Ranges From 60 to 160 hp

The 1950 line of Chris-Craft marine engines, designed specially for marine use by marine engineers, is offered in eight different power units, ranging from 60 to 160 hp.

Outstanding in the new line are the various reduction drives, adaptable to single or twin engines. Thus providing an extremely wide range of efficient and powerful installations to minimize operation costs for auxiliary sailboats, work boats, fishing boats, cruisers, runabouts, utility boats and even sea-going motor yachts.

Through many years of research and testing by engineers of both boats and marine engines, Chris-Craft features centralized suspension mounts with tension rubber cushions for quiet performance; pre-heated water by exhaust manifold for cooling system, keeping the engine at best operating temperature and insuring good lubrication; non-drip carburetors for safety precautions and precision built throughout by trained mechanics to produce an engine for dependability, economy, ruggedness, longer life, and quiet top-notch performance throughout the power range.

Cannery Machinery Building Firm Control Is Shifted

United Sales & Engineering Company has taken over the business and plant of the former United Welding & Manufacturing Company at 8705 Crocker St., Los Angeles. Harry C. Reed and Phil Harris are now operators and sales agents for the plant which, for years has specialized in manufacture of fish-canning equipment, sent to plants all over the world.

One of the latest exports was a complete shrimp-canning plant to Pesquera de Topolobampo, S.A., Topolobampo, Sin., Mex., one of the largest shrimp-freezing and processing establishments in the Gulf of California. The adjunct to the sharp-freezing plant has a capacity of 1,000 cans daily. Closing machine was by Continental Can Company.

Roebling Firm Announces Three New Pacific Agents

F. G. Hoyt, general manager of the Woven Wire Fabrics Division, John A. Roebling's Sons Company, Roebling, N. J., announces the appointment of three new agents for insect wire screening, galvanized hardware cloth and industrial wire cloth. They are: Flynn and Enslow, 1740 17th Street, San Francisco; Industrial Wire Products Corp., 2039 Sacramento Street, Los Angeles; and Pacific Wire Works Co., 4515 Sixth Avenue, Seattle.

The appointments were made in line with the division's new merchandising plan, according to Hoyt, and full stocks will be carried to expedite customer service in the Pacific Coast area.

Goodrich Cutless Bearings Featured by L. Q. Moffitt

B. F. Goodrich Cutless bearings are featured again this year at the National Boat Show in New York. The exhibit will be in the charge of Lucian Q. Moffitt, Inc., national distributors of Cutless bearings.

Lucian Q. Moffitt, Inc., are stressing the many advantages of Ameripol oil resisting rubber now used in all Cutless bearings for both pleasure boats and commercial vessels. Ameripol was developed by The B. F. Goodrich Company through years of research and was definitely established as a superior bearing wearing material when used on the largest naval vessels.

Because Ameripol Cutless bearings have better heat, oil and wear resisting qualities, there is no hesitancy in recommending them for operation in any waters. The design of the bearings makes them particularly adaptable to shallow draft operation.

Cutless bearings are water lubricated and the soft rubber permits abrasive particles to be rolled into water grooves. Sand and silt are flushed from the bearing by the lubricating water preventing scoring of propeller shafts.

"Caterpillar" Booklet Features Alaska Salmon Power Scows

A twelve-page illustrated booklet entitled "Working the Waters," published by Caterpillar Tractor Co., features two Alaska salmon power scows, *Cachalot* and *Blackfish* of the Alaska Packers Association's fleet. The booklet is devoted to work boats and the specifications for 10 different model "Caterpillar" diesel engines are given with a special page devoted to complete description of the "Caterpillar" marine engine fuel system.

Copies of this pamphlet may be obtained by requesting Form 12481 from Caterpillar Tractor Co., Peoria 8, Illinois, or by contacting the "Caterpillar" dealer in your territory.

B. C. Nordberg Distribution Now Directed by Sangster

Distribution of Nordberg gasoline engines in the marine field is now being directed in British Columbia through R. Cliff Sangster, 1779 West Georgia St., although Nordberg diesels will continue to be sold in that territory through Northwest Distributors, managed by A. P. Pilkey, at a new location in North Vancouver.

The Sangster organization has been operating in the marine engine field in Vancouver for 20 years, and among its other lines are Hill diesels, Gladden air cooled units and Evinrude.

ED BUGDEN, owner of the Ketchikan halibuter *Alki*, recently hooked onto a set of deer horns about 4 miles offshore. The three-point antlers had been in the sea for many years — long enough to collect barnacles.

Red Wing Engine Line Features Diesel Models

The Red Wing marine engine line for 1950 features models in the full diesel type. Two heavy-duty 6-cylinder sizes are available now. The D6-200 and the D6-160 engines are especially suited for heavier duty boats, 50' to 100', and both are available with various ratios of reduction gears. Already in extensive use is the 65-hp diesel marine "four" of 4¼" bore and 4½" stroke.

A smaller 4-cylinder model is under development now to be ready early in 1950. Normal power developed is 30 hp.

Four New Models Widen Chrysler's Power Range

Announcement of greater power range for the Chrysler marine engine line was made in Detroit recently by the Marine Engine Division of Chrysler Corporation. The complete line which now comprises seven engines has many new improvements and innovations.

To the "Ace," "Crown" and "Royal" models, which previously comprised the Chrysler marine engine line, has been added the "Ace Special," "Crown Special," "Royal Special" and the "Majestic," Mr. Keller said. All models are six-cylinder except the eight-cylinder Royal and Royal Special.

Boat owners are expected to center unusual attention on the Majestic, an innovation in the Chrysler line, with a 4" x 5" bore and stroke developing 160 hp. at 3000 rpm. Piston displacement is 376.9 cubic inches. Standard equipment includes sodium cooled valves, silcrome steel stellite faced valve seats for both intake and exhaust valves. Advance indications are that the Majestic will prove particularly popular with fishing craft owners.

Basic specifications of the 1950 line were given as follows:

Model	*Horse Power*	*Maximum R.P.M.*
Ace	87	2800
Crown	104	2800
Royal	135	2800
Majestic	160	3000
Ace Special	105	3600
Crown Special	125	3600
Royal Special	165	3600

All models are available in straight drive and with the following reduction gear ratios: 1.43 to 1; 2.04 to 1; 2.56 to 1; 3.17 to 1; and 3.95 to 1.

The engines can be adapted to efficient and economical operation in different types of craft, from heavy work boats and auxiliaries where a slow-turning, big-diameter propeller is a necessity, to light, high-speed runabouts where direct drive produces the best results. Helical reduction gears, with a high degree of interchangeability, can be assembled in four different positions to accommodate various shaft angles and to fit into diverse interior layout plans in different boats.

ADAMS AMERICAN NETTING TUBBS CORDAGE PABCO MARINE PAINTS

A. D'ACQUISTO & SONS

FISHERMEN'S SUPPLIES

COMPLETE TROLLING EQUIPMENT

Phone: 8110; Residence, 4466 Municipal Wharf, Monterey, Calif.

ADVERTISING INDEX

Adams Net & Twine Co. 4
Akervick Bros. Machine Wks. 62
Alaska Steamship Co. 62
Albina Engine & Machine Wks. 52
American Can Co. 5
Avondale Marine Ways, Inc. 48

Baier & Assoc., L. S. 62
Bludworth Marine 52

Camillo, J. J. 64
Campbell Machine Co. 62
Caterpillar Tractor Co. No. 3 Cover
Chrysler Corp. 34
Columbia River Packers Assn., Inc. 56
Construction World 60
Consolidated Fisheries, Inc. 36
Continental Can Co. 3
Cooper-Bessemer Corp., The 22

D'Acquisto Fish Products, A. 62
D'Acquisto & Sons, A. 63

Eardley Fish & Fillet Co. 44
Ederer Co., R. J. 2
Enterprise Engine & Foundry Co. 9
Enterprise Mfg. Co. 52

Fairbanks, Morse & Co. No. 2 Cover
Fibreboard Products, Inc. No. 4 Cover
Fishermen's Packing Corp. 50
Fish Net & Twine Co., The 7
Fremont Electric Co. 58
Frohman & Sons, L. H. 60

General Motors Corp., Detroit Diesel Engine Div. 25
Gifford-Wood Co. 48
Gosse Co., F. A. 61
Grandy Boat Co. 64
Gunderson Bros. Engineering Corp. 50

Haines Oyster Co. 62
Hanson, H. C. 62
Harbor Boat Bldg. Co. 62
Heminway & Bartlett Mfg. Co. 26

International Paint Co. 8
Intervox Corp. 60

Kaakinen Fish Co. 54
Kazulin-Cole Shipbldg. Corp. 58
Kelley-Clarke Co. 42
Kelvin-White Co. 56
Kohlenberger Engineering Corp. 64
Kolstrand Mfg. Co. 62

Larson Boat Shop, Al 62
Lathrop Engine Co., The 4
Lawrence Co., J. E. 64
Linen Thread Co., Inc. 17
Lister-Blackstone, Inc. 6
Long Beach Salt 60
Lubriplate Div., Fiske Bros. Refining Co. 48

McLaughlin Co., Inc., H. G. 62
Mishawaka Rubber & Woolen Mfg. Co. 36
Monk, Edwin 62
Murphy Diesel 38

National Supply Co., Superior Diesel Div. 37
N. C. Marine 56
Newby, G. Bruce 62
New England Fish Co. 58
Nordberg Mfg. Co. 33
Nordby Supply Co. 58
Northern Products Corp. 64
Northwest Iron Works 60
Nuttall-Styris Co. 64

Oakite Products, Inc. 55
Oceanic Sales Co. 36
Oxenberg Bros. 60

P & L Welding & Machine Works 56
Pacific American Fisheries, Inc. 40
Pacific Marine Supply Co. 10
Pacific Tel. & Tel. Co., The 56
Pan American Radio Corp. 64
Pauls Fish Net Co. 9
Petersburg Cold Storage Co., Inc. 62
Port Orford Fish Co. 54

San Diego Marine Construction Co. 62
San Juan Fish & Packing Co. 46
Seaside Supply Stores, Inc. 62
Sitka Cold Storage Co. 62
Stamm-Schulman & Co. 58
Standard Oil Co. of Calif. 28
Standard Steel Corp. 6
Stay-Tite Products Co. 60
Stikine Fish Co. 62
Sunde & d'Evers Co. 44

Tacoma Boatbuilding Co. 54
Tide Water Associated Oil Co. 30
Tubbs Cordage Co. 8

Union Diesel Engine Co. 54
Universal Motor Co. 50

Vita Food Products, Inc. 60

Washington Laboratories 46
Wendt, Ivar 55
Whiz Fish Products Co. 52
Willapoint Oysters, Inc. 62
Wilvers & Defever 62

KOHLENBERGER ENGINEERING CORPORATION
DEPENDABLE REFRIGERATION SINCE 1922
FULLERTON • CALIFORNIA

DEPENDABLE REFRIGERATION

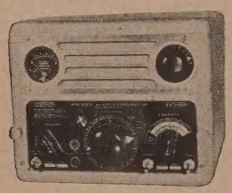
SERVING PACIFIC FISHING FLEETS SINCE 1922

Our engineering staff is always at your service. Phone or write for name of nearest boat yard to serve you.

Foreign Inquiries Solicited

General Offices and Factory:
FULLERTON, California

Telephones
LA. Mutual 6497 Fullerton 1120



AT YOUR DEALERS NOW — THE NEW

PAR-fones — *10 - 30 - 100 - Watts*

PAR-finder D. F. — *with Deviation Compensator*

Outstanding in Value and Performance

PAN AMERICAN RADIO CORPORATION

Model 85 - 30 Watts 5210 Ballard Avenue DExter 4960 SEATTLE 7, WASHINGTON

J. J. CAMILLO
Wholesale SEA FOOD Broker
935 W. Harbor Drive, SAN DIEGO 1, California
Maritime Agency
BROKER and AGENT
Phone Franklin 5189

J. E. LAWRENCE CO.
SEAFOODS
BROKERS — JOBBERS
PORTLAND 9, OREGON
Phone Atwater 3328 *Established 30 Years* Teletype PD298

It Pays to Advertise in
PACIFIC FISHERMAN
Because:
(1) Complete coverage of a major market; (2) An active reader interest; (3) A group of prospects with the inclination and ability to buy.

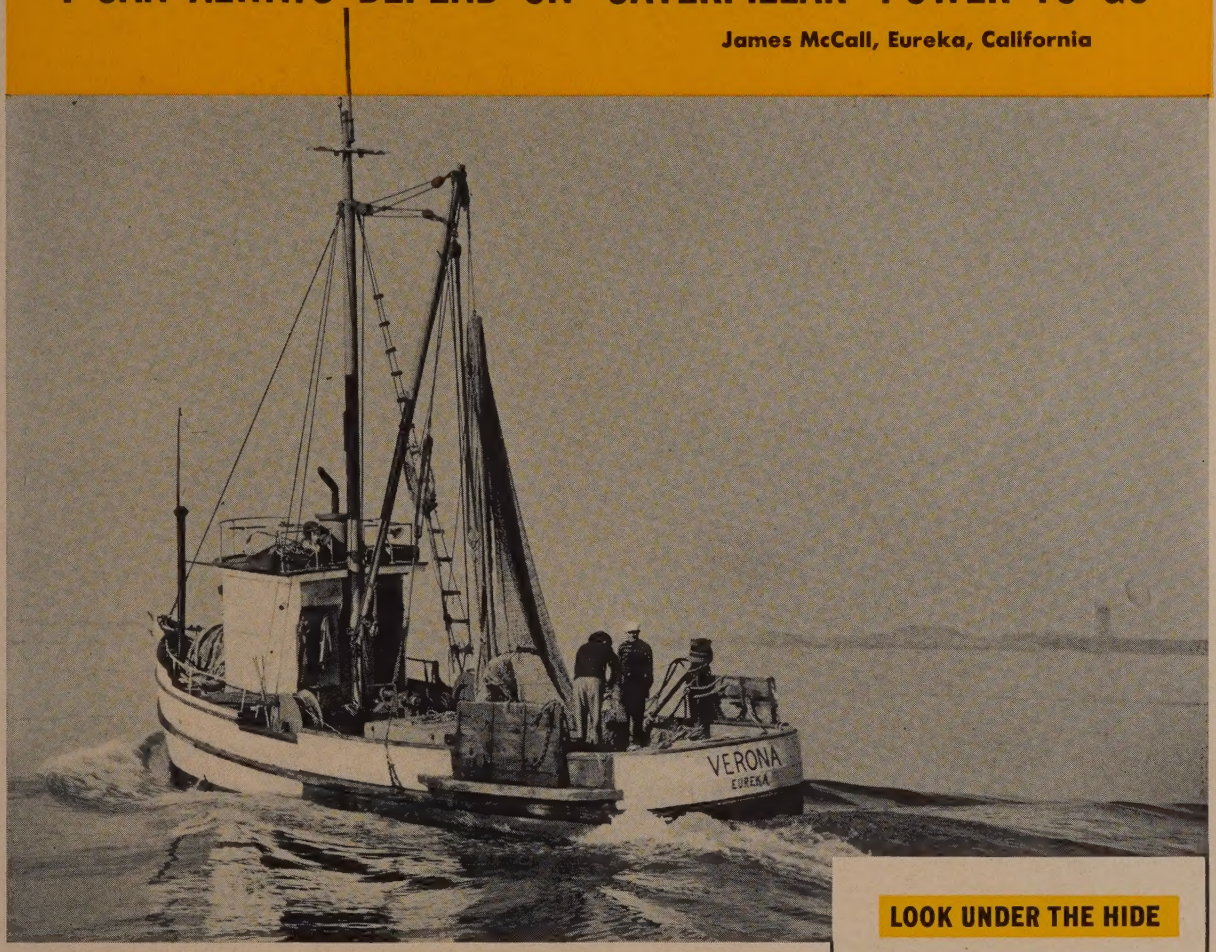
GRANDY BOAT COMPANY
MARINE WAYS
BUILDERS OF ALL TYPES OF FISHING VESSELS
REPAIRS and ALTERATIONS
2538 Westlake Ave. North Seattle 9, Wash.

NUTTALL-STYRIS CO.
825 Columbia FISHERY SUPPLIES San Diego 1, Calif.

NORTHERN PRODUCTS CORPORATION
Distributors
American and Canadian
MILD CURED and FROZEN SALMON
200 *Bell St. Dock Pier 66* *SEATTLE 1 U.S.A.*

"I CAN ALWAYS DEPEND ON 'CATERPILLAR' POWER TO GO"

James McCall, Eureka, California



A "CATERPILLAR" Diesel D8800 Marine Engine powers James McCall's sturdy 48-foot *Verona*. Operating from 16 to 18 hours a day in fishing weather, the D8800 swings a 42″ x 38″ wheel through a 3:1 reduction. A Twin Disc front power take-off runs winches and bilge pump. Mr. McCall, who fishes the *Verona* all the way from Astoria, Ore., to San Diego, Calif., reports:

"I've been fishing for 25 years and have seen lots of boats and lots of engines. As far as I'm concerned, there isn't anything better than a 'Caterpillar' engine for fishermen."

Thousands of other experienced fishermen agree with him. They know how much it means to have an engine that takes them out and brings them back without fouling . . . that delivers reliable, low-cost power day after day . . . and that is backed in port by a prompt, efficient dealer service.

Your "Caterpillar" dealer is as close as your phone. Call him today for convincing facts about "Caterpillar" economy and dependability.

Caterpillar Tractor Co., San Leandro, Calif.; Peoria, Ill.

LOOK UNDER THE HIDE

Lubricating oils break down at high operating temperatures, forming carbons, lacquers and gums — enemies of long engine life. To prevent lube oil breakdown, "Caterpillar" Engines are equipped with oil coolers. Pistons are sprayed to remove heat. Controlled oil temperature preserves lubricating qualities, reduces maintenance costs, adds to owner profits. Look under the hide for quality.

CATERPILLAR DIESEL

REG. U. S. PAT. OFF.

Marine Engines

CATERPILLAR TRACTOR CO.
BOX PF-1, PEORIA, ILLINOIS

Send me, without obligation, booklet, "Your Fellow Skippers."

*Name*_____

*Address*_____

*Attractive design plus good paperboard plus rigidly-controlled printing equals a carton with S.A.**

* Sales Appeal

14 plants in the three major industrial areas of the Pacific Coast...strategically located to serve the packaging needs of all Western industry

FIBREBOARD
Products Inc.

6 BOARD MILLS & CONVERTING PLANTS

247

SAN FRANCISCO · LOS ANGELES · OAKLAND · PORTLAND · SEATTLE · SAN JOSE · FRESNO
SACRAMENTO · SALT LAKE CITY · NEW YORK · PHILADELPHIA · BALTIMORE · HONOLULU